



MACMILLAN AND CO., LIMITED
LONDON • BOMBAY • CALCUTTA • MADRAS
MELBOURNE

THE MACMILLAN COMPANY
NEW YORK • BOSTON • CHICAGO
DALLAS • ATLANTA • SAN FRANCISCO

THE MACMILLAN COMPANY
OF CANADA, LIMITED
TORONTO

HUMAN AFFAIRS

PLANNED AND EDITED BY

R. B. CATTELL, M.A., B.Sc., PH.D

J. COHEN, M.A.

R. M. W. TRAVERS, B.Sc.

MACMILLAN AND CO., LIMITED
ST. MARTIN'S STREET, LONDON

1937

COPYRIGHT

PRINTED IN GREAT BRITAIN
BY R. & R. CLARK, LIMITED, EDINBURGH

AUTHORS

PROFESSOR J. B. S. HALDANE, F.R.S.

PROFESSOR DAVID KATZ, Ph.D.

DR. A. S. J. BASTER, M.Com., B.Sc.

MR. E. CHAMBERS, M.A.

LORD RAGLAN

DR. C. P. BLACKER, M.C., M.A., M.D., F.R.C.P.

SIR HENRY BRACKENBURY, M.D., LL.D., M.R.C.S.,
L.R.C.P.

DR. R. B. CATTELL, M.A., B.Sc., Ph.D.

PROFESSOR M. GINSBERG, M.A., D.Litt.

DR. HAVELOCK ELLIS

PROFESSOR B. MALINOWSKI, M.A., D.Sc.

DR. EMANUEL MILLER, M.A., M.R.C.S.,
L.R.C.P., D.P.M.

PROFESSOR K. MANNHEIM, Ph.D.

THE EARL OF LISTOWEL, Ph.D.

PROFESSOR WILLIAM McDougall, F.R.S.

PREFACE

ALTHOUGH the approach to social and political problems to which this book gives expression is, so to speak, in the air and formulating itself in many minds simultaneously, a note on the origin of this particular work may be of interest to the reader.

Rather more than two years ago, two of the three editors who planned and consummated this project, working as research students in the Psychological Laboratory at University College, London, planned a departmental journal with the object of making immediately available the results of scientific work of topical social interest. Dr. Cattell had independently been planning a journal to form a body of opinion among the general public in favour of referring political, social, and cultural problems to the sciences which deal with humanity. At the British Association in Norwich in 1935 the three future collaborators discovered their common interest. An editorial board of leading authorities in the various sciences was formed, and a periodical, *Human Affairs*, was projected to bring topical problems into fruitful contact with recent advances in the social and biological sciences. It is as an attempt to pave the way for this periodical and to measure the extent of public support awaiting it

HUMAN AFFAIRS

that the present volume has been launched. If the response is adequate the monthly journal *Human Affairs*, managed by the same editorial board, will appear in due course.

Among the many people whom we have to thank for various suggestions are : Professor Cyril Burt in particular for his initial encouragement, Professor Julian Huxley, Mr. H. G. Wells, Mr. Gerald Heard, Professor Charles Spearman, Lord Snell, Professor F. C. Bartlett, Mr. Eric Farmer, Dr. Angus Macrae, Sir John Orr, Dr. Havèlock Ellis, and Professor J. C. Flugel. We are also indebted to Mr. H. Lewis for his very able English rendering of Professor Mannheim's chapter ; and Mr. W. Tidman for compiling the index.

THE EDITORS

CONTENTS

CHAPTER I

EDITORIAL. The Editors	PAGE I
----------------------------------	-----------

CHAPTER II

SOCIETY AS A BIOLOGICAL EXPERIMENT. Professor J. B. S. Haldane	19
---	----

CHAPTER III

PSYCHOLOGICAL NEEDS. Professor D. Katz	36
--	----

CHAPTER IV

ECONOMIC PLANNING. Dr. A. S. J. Baster	55
--	----

CHAPTER V

PSYCHOLOGY IN THE INDUSTRIAL LIFE OF THE NATION. Mr. E. Chambers	72
---	----

CHAPTER VI

RACE AND MODERN SOCIETY. Lord Raglan.	90
---	----

CHAPTER VII

EUGENICS AND SOCIAL PROGRESS. Dr. C. P. Blacker	107
---	-----

CHAPTER VIII

MEDICAL PROGRESS AND SOCIETY. Sir Henry Bracken- bury	123
--	-----

HUMAN AFFAIRS

CHAPTER IX

	PAGE
EDUCATION, AND THE SCIENCES OF HUMAN NATURE.	
Dr. R. B. Cattell	140

CHAPTER X

SOCIOLOGY AND HUMAN AFFAIRS. Professor M. Ginsberg	166
--	-----

CHAPTER XI

EROS IN CONTEMPORARY LIFE. Dr. Havelock Ellis .	181
---	-----

CHAPTER XII

ANTHROPOLOGY AS THE BASIS OF SOCIAL SCIENCE.	
Professor B. Malinowski	199

CHAPTER XIII

NEUROSIS AND CIVILIZATION. Dr. Emanuel Miller .	253
---	-----

CHAPTER XIV

PRESENT TRENDS IN THE BUILDING OF SOCIETY.*	Pro-
fessor K. Mannheim	278

CHAPTER XV

SCIENCE AND LEGISLATION. The Earl of Listowel .	301
---	-----

CHAPTER XVI

PHILOSOPHY AND THE SOCIAL SCIENCES. Professor	
W. McDougall	319

APPENDIX	347
--------------------	-----

INDEX	357
-----------------	-----

* Translation by Mr. H. Lewis.

LIST OF ILLUSTRATIONS

J. COHEN	}	.	.	.	<i>Facing page</i>	6
R. M. W. TRAVERS						
PROFESSOR J. B. S. HALDANE	.	.	.	„		19
PROFESSOR D. KATZ	.	.	.	„		36
DR. A. S. J. BASTER	.	.	.	„		55
E. CHAMBERS	.	.	.	„		72
LORD RAGLAN	.	.	.	„		90
DR. C. P. BLACKER	.	.	.	„		107
SIR HENRY BRACKENBURY	.	.	.	„		123
DR. R. B. CATTELL	.	.	.	„		140
PROFESSOR M. GINSBERG	.	.	.	„		166
DR. HAVELOCK ELLIS	.	.	.	„		181
PROFESSOR B. MALINOWSKI	.	.	.	„		199
DR. EMANUEL MILLER	.	.	.	„		253
PROFESSOR K. MANNHEIM	.	.	.	„		278
THE EARL OF LISTOWEL	.	.	.	„		301
PROFESSOR WILLIAM McDougall	.	.	.	„		319

CHAPTER I

EDITORIAL

MOTIVE

THIS work bears witness to a new movement that is stirring in the thought of social scientists everywhere. There has been a new awakening of responsibilities ; a keener realization has dawned of the nature of the potent forces that direct our lives. To control these forces is the most urgent need of our age. Scientists stand aghast witnessing the prostitution of their work to the baser impulses of man. They begin to see that the splendid scientific activity which characterizes our age, the mastery of elemental and natural powers to which we have attained, is leading us to a cataclysm whose horror we can only conjecture. They perceive now fully, for the first time, the immediate bearing of their discoveries upon the workings of modern life. They realize that these discoveries have transformed social life without solving any social problems, that, indeed, they have multiplied economic, biological, and psychological difficulties. No wonder, then, that they seek at once to safeguard their work from the blunders of the incompetent and the heedless, and the grip of the psychopathic and the criminally selfish.

HUMAN AFFAIRS

It is the clearly defined purpose of this book to allow the scientist to describe his larger vision. It is not intended as a mere literary presentation of certain aspects of science nor as a compendium of useful facts. Rather is it a manifesto of action, a first effort to give articulate utterance to the reasoned voice of science demanding its rightful place in the control of human affairs.

THE SCIENCES AND SOCIAL EVILS

What are the primary issues? It is clear that the sciences fall into two groups. There are, on the one hand, the purely physical sciences like chemistry, mechanics, etc., that are concerned with the behaviour and control of matter. On the other hand, there are the human sciences like sociology, psychology, biology, etc., which strive to understand all the processes involved in life. A short time ago, every intelligent citizen was loudly singing the praises of the physical sciences whose remarkable growth produced such wonders in matters of material production, transport, communication, and human comfort. To-day he bitterly complains that physical science has radically altered social life, revolutionized our outlook, called our old loyalties into question without offering any solution for the manifold social and personal problems which it generated. Vast wealth centred in a few pockets has brought wretchedness and misery and, above all, waste, to untold millions. The incidence of neurosis has, through the strain of modern life, increased beyond measure. The rush, noise, and turmoil of the city; exacting

EDITORIAL

labour; the competitive employment market, have heightened the tension of life and engendered disorders of a new kind. Accidents, malnutrition, and disease are ever-present ghouls, whilst the decline of the fertility rate has given rise to a serious problem of another order. Moreover, the growing burden of political unrest is a source of constant concern, casting its sinister shadow across all social discussions; whilst not least disturbing are the grave injustices inflicted in the name of "patriotism" or "progress". Beyond this new yield of disorders we have the abiding problems of living, the persistent interrogatories of sex, of education, of religion; these require fresh wisdom and fresh knowledge in every age, and it is precisely because it is in our own time that people have turned from facile theories to "stubborn and irreducible facts" that we have to give a new sense to our social forms and institutions.

REACTION IS NO SOLUTION

It will not improve matters if in this dangerous situation we become panic-stricken, call a halt to all scientific advance, and revive in the community a reactionary machine-wrecking spirit. There is no return. We may not, like Lot's wife, be enamoured of our own past and gaze steadfastly at the atrophy of our former selves. Rather must we bend all our forces in a determined attempt to make equivalent progress in human affairs.

HUMAN AFFAIRS

POSITIVE VIEW

We look to the human sciences for the solution of our social problems. Let us then, without delay, apply the findings of these sciences. And these findings are quite objective. They are not tainted with party bias, but based on experiment which can be relatively free from human error. The roots of unemployment, ill-health, mental disorder, warfare, and all the other major and minor troubles of our time, can only be unearthed by scientific research, and remedied only by such research. There is no other way. We have already gone far towards diagnosing many of the forces which produce these evils. Scientists have shown us that the so-called scourges of fate, the retribution of an avenging Jove, are due to our ignorance. Social evils can be progressively eradicated through human wisdom and human effort. Whether the affliction be rheumatic pains, venereal disease, or paranoia it is not to be regarded as inevitably imposed by the deity to purge the human soul. It may be due to nothing more than inefficient politicians. It was only the inordinate conceit of our forebears which imagined that the deity solved the problem of his leisure by contriving pernicious ailments to inflict upon a backsliding humanity. "As flies to wanton boys", said they, "are we to the gods; they kill us for their sport". Now we believe that we ourselves are the undisputed authors of our evil works, the deity being in this regard only a benevolent reviewer. It is therefore not our fate to struggle constantly trying to adapt ourselves to an unchanging environment.

EDITORIAL

And taking this standpoint, our cultural values of religion, morality, and art become liberated from serfdom to unreal human inadequacy. We need not preserve poverty to enable us to be charitable, nor be so concerned for the preservation of our virtue. Nor need we fear a life of realism lest the magic flower of art shrivels in our hand. These things will take care of themselves. We have one task : to remove those evils which confront us on all sides.

SOLUTION BY EXPERIMENT NOT OPINION

It cannot be repeated too often that social and political problems are to be solved by the methods of deliberate planned experiment, not by mere clash of opinion or armed forces. Only in this way can we substitute fact for feeling and reality for dream.

It has been said that democracy is superior to civil strife in that it replaces a counting of heads for a cracking of heads. But a counting of heads is no infallible criterion of truth ; indeed it seems to many so fallacious that they advocate a return to the pre-numerical method.

PRESENT IMPASSE

To-day politicians ring the changes on the old habitual group reactions of democracy and dictatorship, armament and disarmament, economic control and *laissez-faire*, religious revival and decay. There is an asymmetry of social progression because there are two orthogonal groups of intelligent men :

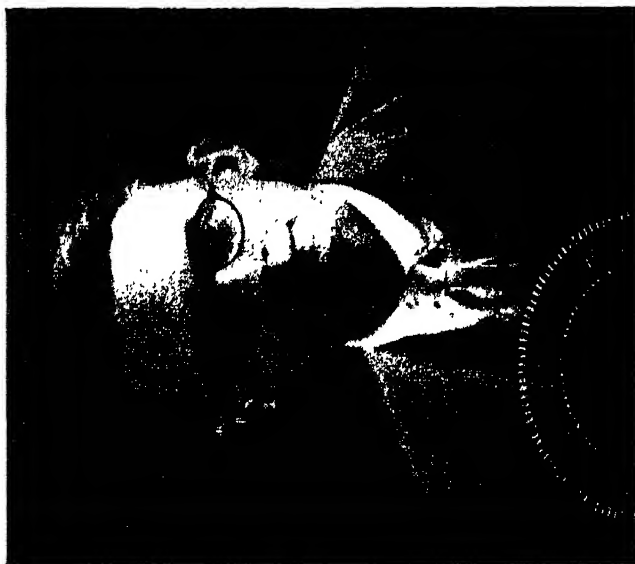
scientists who enquire and politicians who wield power—the enquiry and the power being unrelated. Many a scientist spends his days solving some complex problem of life, only to find when he has done so that he cannot make people heed the usefulness of his discovery. Many a politician wastes his life attaining a position of power, to find when he gets there that he can only abuse it.

One might have expected that the sheer monotony of having to suffer the same social evils all the time would be enough to spur our legislators to action. No rational being would endure pain from the same tooth if there were a dentist available. Yet our leaders are content to chew the cud of unemployment year after year without end.

SCIENCE AND POLITICS

The new alternative which the human sciences holds out is that each and every problem of social life will yield to intelligent and patient investigation by the psychologist, the economist, or the biologist. But, one may well ask, does this not in the end yield to a new dictatorship—the dictatorship of the scientific specialist—a dictatorship no more to be tolerated because it is in the hands of the human scientist disinterestedly bent on improving human relationships?

Let us see first what fitness the scientist has for governing. For if the scientist, becoming increasingly aware of the politician's inadequate mental equipment for dealing with the social and material problems of the modern world, succeeds in making



R. M. W. TRAVERS



J. COHEN

EDITORIAL

his criticisms more widely felt, it is at least a possibility that he will be invited to become the politician.

Now to the proposition that the scientist should become a politician, no-one will offer greater opposition than the scientist himself. In the first place, the scientist's real interest is in the investigation itself, and his attitude to applications is most truly, though brutally expressed by that learned society whose toast runs, "Let us drink to the next great scientific discovery, and may it benefit nobody". There are, it is true, many minor scientists who are seduced from the path of research by the princely bribes which industry offers to those who will turn to applied science, but these are no more typical of science than bishops are of unworldly men. And there are others who are practically commanded to serve the community in some essential routine, like Newton who became a conscientious master of the Mint, and ceased thereafter to have any scientific productivity. Scientific research is a full-time occupation. It has, moreover, a fatal fascination. "*Vivez dans la paix sereine des laboratoires*", said Pasteur to the youth of France. Once a man has tasted of that austere discipline and calm he will not readily exchange it for the wrangling spirit, and the unintelligent obsession with trifles, which are all too often found among politicians and the press.

THE COMPLETE SCIENTIST

Apart from his inclinations, both the scientist's abilities and his peculiar disabilities stand in the way of his becoming an organizer of men. His assets lie

in a powerful intelligence, a logical bent, and training in detached research. His debit balance is his world-shy temperament, the alien quality of his values to those of the people he would have to lead, and the microscopic vision which comes of peering into narrowly restricted fields of work and which causes him to forget too easily the plan of the whole. This last is a serious disability indeed. There are physicists who see in every waterfall only so much wasted energy ; economists who, for the sake of making the wheels work merrily in some favourite scheme of economic machinery, would frustrate the political instincts of a people ; and psychologists, impressed by some recurrent problems in psycho-therapy, who would jettison a whole system of morals by removing restrictions on sexual expression or abolishing that spirit of emulative competition from which the drama of life is born.

In short, there is a kind of absent-mindedness about the scientist, arising from an exaggerated singleness of purpose, which makes him terribly prone to throw away the family with the bath water.

THE PHILOSOPHICAL LEADERSHIP OF SCIENCE

Because of these objections the free and progressive mind, beginning by being justly indignant at an incompetent Government which excludes the scientist from important office, ends by having to recognize that unless science is in close touch with life as a whole, it is not fit to govern. At this discovery the enthusiast for reform may gloomily admit that he has to retreat to the unimaginative and

reactionary ranks of those who have always said that science is a mere handmaid, a tool for purposes beyond its ken, and that it has no power in itself to re-create morality, religion, or philosophy. To such a false conclusion he has been betrayed through confusing science with one type of scientist and the philosophical possibilities of science with the physical sciences only.

Wherefore the physical sciences may in the first place be tools and toys in the hands of men who continue to be naïvely controlled by dogmatic theologies and uncomprehended taboos, but the human sciences promise to give a new form to mind and feeling and to revolutionize philosophical thought. It is because the biological sciences, and especially those of man and mind, have been so long neglected by our universities that the scientist as we know him to-day cannot be trusted to replace the politician and the priest or even to avoid confusing his own realistic scientific concepts with merely irrational and archaic forms of religious, moral, and patriotic sentiments—or the equally unmitigated counter prejudices to those mental habits.

WHAT DOES SCIENCE OFFER ?

Perhaps we speak too much of social sciences in the abstract, whereas our aim would be made more clear by pointing to the actual contributions that are made in these chapters.

The contribution of economics to current social problems has been so practical in nature that people are apt to forget first that it is a science rather than

a tool of industrial reorganization, and secondly, that other social sciences also have their part to play.

In Dr. Baster's comprehensive study of economic planning there is an astringent and critical quality which puts a timely end to these dangers. "At present", he writes, "the enthusiasm for economic planning far outruns the knowledge of its practical possibilities and its reaction on the economic system".

Medicine, by contrast, remains to such an extent the "silent service" among the applied social sciences that Sir Henry Brackenbury's authoritative exposition of the revolutionary changes in technique and outlook which have taken place in the last few decades should evoke wide public interest. Its culminating theme is contained in the quotation "the onus as regards health has passed from individual and purely professional to communal action".

Preventive medicine, followed to its logical conclusion, leads one to eugenics. This branch of applied science comes into the considerations of Haldane and McDougall and crops up afresh in Cattell's chapter on Education, but it receives its most thorough and convincing treatment by Dr. Blacker, the Secretary of the Eugenics Society, in a chapter which is especially interesting because of the skill with which the ship of eugenic purposes is steered through the rocky passages of political prejudices and scientific problems which thickly beset this subject.

No livelier exponent of the place of biological science in contemporary affairs could be found than Professor Haldane, whose wide practical experience

of biological applications enables him to knit the above chapters together in a single stimulating conception.

From this we pass to a subject, education, which is scarcely yet a science but upon which the proper utilization of all other social sciences in the service of human progress eventually depends. Dr. Cattell, as one of the first psychologists actually acting in an advisory capacity in our educational system, attempts to unfold the vision upon which the new plan of education is being based and contrasts it with persisting traditional systems which need to be slowly demolished as the new structure is realized.

The insistence of the above writer that education is a branch of psychology brings our attention more sharply to psychology itself, which is dealt with from three aspects, severally by Professor Katz, Mr. Chambers, and Dr. Miller. Giving so large a representation to psychology in a book on the social sciences may at first seem to betoken a disordered sense of proportion. But these studies of psychological ramifications in economics, medicine, and industry can leave little doubt that psychology must be regarded as the keystone of the social sciences.

Realizing that all aspects of human motivation cannot be satisfactorily treated in the space of a single chapter, Professor Katz makes a special study of the hunger drive and shows from its far-reaching consequences the importance of a scientific knowledge of primary and secondary needs for general legislation and sound economy.

The largest field of applied psychology is dealt with by Dr. Emanuel Miller, who shows that psy-

chopathology concerns more than the administering of physic to the inmates of mental homes ; it governs the conditions of mental stability and social adaptation in all of us. Widely applied psychotherapy would demonstrably do much to remove many maladjustments obliquely engendering public and private discontents. Mr. Chambers continues the study of psychological applications to industrial efficiency and sound vocational guidance, bringing to bear an unrivalled experience of pioneer work in this field.

It is not surprising that an anthropologist such as Malinowski, whose original field work has done so much to awaken us into perceiving, objectively, the relativity of our own social customs, economic pursuits, and religious ideals, produces a chapter which, in the novelty of its viewpoint, is perhaps the most striking in the book.

A round-table conference attempting to demonstrate the applicability of the human sciences to social problems would not be complete without an account of the reception which such attempts are likely to receive from those engaged in social work. Lord Listowel speaks with the authority of a leader who has long been in the thick of social welfare work and who at the same time preserves a keen sympathy with the scientific viewpoint. His synthesis of both worlds is one of the most valuable services which this book can perform.

Havelock Ellis writes of social taboos scientifically considered, as one whose life has been responsible for cleansing society of the greatest of the taboos. His classical scientific studies of the psy-

chology of sex enable him to write a chapter on sex in modern society, and the problem of sex education, which is hall-marked in every shade of thought and feeling by a rare maturity and wisdom.

Throughout it has been the deliberate intention of the editors not to gloss over differences of opinion between the contributors nor to eliminate some amount of overlap, for the handling of differences of opinion is a problem which exists, though in a more tractable form, even when social problems become the business of scientists instead of politicians. Thus Lord Raglan's chapter on race displays such a liberal reaction to traditional views that many anthropologists and psychologists would say that he goes too far. Professor McDougall, for one, has shown the immense importance of the racial mental differences which Lord Raglan denies, whilst the ideal of a raceless world is one which must be scientifically considered beside the newer ideal of an experimental evolution of racial peculiarities, an ideal arising from an increased consciousness of the need to attend to our hereditary make-up.

Such complexity within the sciences brings us to the necessity for an integrating science. The conception of sociology as a science which includes all the biological sciences is very thoroughly worked out by Professor Ginsberg in one of these chapters which bind the whole book together. In the second of these Professor Mannheim essays the related task of bringing all the social forces into line and asking what part the sciences have to play in present trends in the building of society. This provides what is necessarily one of the most complex discussions in

the whole book, but a discussion which greatly illuminates the whole problem of integrating the social sciences into the purpose of a society hitherto blindly struggling from one traditional pattern to another.

Finally McDougall attacks the ultimate question in this application of the sciences, which is the relation of science to philosophy. He returns to the traditional view that philosophy is something beyond science, but he shows that it is more closely bound up with science than pure philosophers would have us think. Man's duties must be brought into relation with his powers. The discovery of the latter is the task of science, of the former that of philosophy.

This brief review of the interrelation of the contributors from all the sciences cannot be better concluded than by means of a quotation from McDougall: "Older civilizations have decayed and passed away because they lacked both science and philosophy. Ours is threatened with a similar fate, and with more rapid destruction than they; not through lack of science, but through one-sided development of the sciences, through the backwardness of the social sciences, which alone, under the guidance of philosophy, can adjust our social systems to the rapid changes of conditions of life produced at an ever-accelerating rate by the victorious physical sciences."

SUPERORDINACY OF SCIENCE

These examples show that the human sciences can solve problems governing our immediate welfare and general advancement just as the physical

sciences achieve order in the world of technics. But the conception of science which ends there—by regarding science merely as a useful hand-maiden to human requirements, a domestic adjunct as it were, a superior hewer of wood and drawer of water—is a grotesquely narrow one. All the material gifts of science are negligible compared to the spirit of enlightenment which it can bring into human affairs.

Science is not a device for making self-filling fountain-pens. Science unveils a new universe of possibilities ; it creates a new order of values ; it demands another way of living. With its vast concept of being we may cast a new mould for the shaping of action. For there is an intrinsic beauty in the architecture of scientific thought, an intrinsic worth in acquiring its realistic type of thinking, a superb ethical discipline in the impersonal quality of its ends. To spread the scientific spirit in the community is a need of the first importance. We must infuse the neutrality of science into the partiality of human affairs. We must leaven the mentality of our age, still heavy with individualistic and archaic modes of thought, with the rationale of science. How else, if not by such an attitude, can the supremely urgent innovations so patiently contrived by the human sciences be made available ?

UNITY OF THIS WORK

Let us above all emphasize the unity of this work, that there is a central theme, a common purpose, animating every chapter. Indeed, this unification of social science is our dominant aim—to co-ordinate

knowledge, to integrate useful truths and focus them upon the problems of the day. If the reader fails to grasp this essential unity he will have missed the whole point of the work, and if we cannot convince him of it we shall have failed in our task. Society, science, and the individual are one indivisible whole. This is the beginning of wisdom which is the necessary condition for any reasoned progress.

Acute observers like Mr. Gerald Heard, Mr. H. G. Wells, Prof. Whitehead, and others have dwelt on the grave peril of specialization inevitably involved in modern research. "The expert", as the late Mr. Chesterton said, "is the man who knows nothing else"; unless this type of expert becomes extinct or unless some compensatory co-ordination is set up, we must be prepared for chaos. Society will become like the centipede each of whose legs is walking in a different direction.

ECONOMICS AND POLITICS

We may seem open to criticism for devoting such little space to purely economic questions. That section may be noteworthy for its sanity and calm reasonableness, but economics, some will argue, should have constituted the main topic of the book. From our standpoint this view is wholly in error. For economic questions are almost always questions of party politics, a field of action barren in the extreme, and from a narrow economic view, little short of completely reconstructing the capitalist system could remedy social evils. Although, as frequently ceded throughout the book, innumerable

EDITORIAL

troubles are due solely to the present system, nevertheless to take our stand solely on this ground would be relatively futile. The social sciences other than economics are, however, apparently at any rate politically neutral, and it is hoped that a great deal can be done by stressing the possibilities in these spheres. A coal-owner would not object to the scientific treatment of delinquency, whilst even an armament manufacturer might, in a momentary weakness, endow a medical research institute.

CONCLUSION

This book, however inadequate, is one with a definite end in view. It is a plea for closer co-operation between scientists, legislators, and society itself; a plea for modelling social life after the pattern of scientific truths. Contemporary society is veined with the blood of science, no aspect of life remains unaffected. The genius of our age lies perhaps more in organization than in anything else. Why, then, should we not systematize that world of human effort with which all sanity, order, and culture are organically bound?

In the periodical "Human Affairs" which, it is hoped, will follow up this first sketch of a philosophy of human science, we intend proceeding to the second task, that of cultivating the body of opinion and shaping the political training of the scientist which will alone make possible the extensive application of reasoned knowledge to human affairs.

If the attitude of this book is primarily one of optimism it is because we believe that the human

HUMAN AFFAIRS

race has only begun to unfold the infinite range of its possibilities. As time proceeds, the task of deliberate conscious control becomes greater and greater. Enhanced powers carry weightier responsibilities. It has been our task to make explicit these responsibilities.



PROFESSOR J. B. S. HALDANE

Reproduced by kind permission of the "Daily Herald"

CHAPTER II

SOCIETY AS A BIOLOGICAL EXPERIMENT

Most animals live either alone, or in family groups consisting of one or two parents and their offspring so long as the latter are dependent. A few are aggregated into larger societies. These again are of several types. They may be greatly enlarged families consisting of a parent and very numerous and active offspring, like a wasps' nest. Such societies imply the specialization of a few individuals for reproduction, and are therefore unlike any actual or possible human community. Among societies where there is no reproductive specialization we have at one end of the scale large groups with complete sexual promiscuity like a shoal of herrings, at the other monogamous unions only ended by the death of one partner, such as are found among many birds. Between these there are all kinds of intermediates; for example, small aggregates of mated couples, like a rook colony, groups which unite temporarily for a special purpose such as migrant bird swarms, and many other types.

Where do human societies fit into this classification? The answer is not simple. A civilized man does not belong to one society only. During most,

but seldom during all of his life, he belongs to a family or some other small organization (*e.g.* a club or an artel) practising some form of internal communism. He belongs to a group of producers which is now rarely coextensive with the family. He belongs to a nation. And he belongs to the world economic organization. This last fact is particularly important in a country like England whose dependence on imported food is a hard biological fact.

All forms of society larger than a tribe of a few dozen families represent an experiment made in the last ten thousand years. What has made them possible? The primary cause has been the extension of human society to include the domesticated plants and animals. This has made it possible to increase the density of human population subsisting on a given area of land several hundred-fold. And this mere quantitative change has brought about a change in the quality of human intercourse. In fact it has made society, in the sense of an organization beyond the family or small tribe, a necessity. Society may be defined as man's reaction to the increased density of population which began in neolithic times with domestication. A people of hunters can, at best, only develop complex social organization during the brief period when they co-operate for some great purpose like the annual buffalo hunts of the Indians of the North American plains. An agricultural community cannot avoid a high degree of social complexity. Anarchism has been out of date since palaeolithic times.

Besides domestication, at least two other im-

portant causes have contributed to the formation of society. One is a change in tradition. By this word I mean all forms of behaviour handed down from one generation to another, including language, techniques of agriculture and industry, morality, religion, beliefs, and organizations: in fact all features of human existence which are not determined by biological heredity on the one hand, or the natural environment on the other. The other cause is a change in human nature, that is to say in the characters determined by biological heredity. The extent of this change is highly questionable. Beyond doubt our innate immunity to disease has altered. It is much less sure whether those innate dispositions which, interacting with the environment, determine our moral and intellectual activities have changed to any great extent.

In the last few centuries a fourth set of causes has come to mould the form of society. We are becoming increasingly dependent on machines which cannot be manufactured without a great deal of co-operation. This calls for a far more complex form of production, and therefore for a far more integrated society than was needed in a community based on agriculture and handicraft. It also makes a greater density of population possible. Both the complexity and density raise problems which are still unsolved.

Now when we consider the biology of human society we must be very careful to limit ourselves. Biology is and must be materialistic. This does not, of course, mean that it must be mechanistic. But so long as we are biologists we are considering

men as animals. The biologist should not try to do the work of the psychologist, economist, or sociologist. He can very frequently tell them where they are wrong. He must not try to tell them where they are right. He can tell the economist what food a population needs, and whether a given agricultural system will provide it. He can tell him that farm labourers live longer than urban workers, and coal-miners than potters. But he cannot add that, therefore, as many people as possible should go back to the land, or that the pottery industry should be abolished. That would only be admissible if it were agreed that long life was the only thing worth having. He can say (though not, I think, on very adequate evidence) that, by certain radical interferences with our existing system of reproduction, the health or intelligence of the population could be improved. But family life, sexual love, and personal freedom are good things (or at any rate things desired), and it is not the duty of the biologist, as such, to weigh them against hygiene or intelligence.

On the other hand, he can, and should, point out the biological consequences, measured in terms of life and death, health and sickness, increase or decline of population, of various social measures. And it is futile to suppose that in doing so he can write or speak as if he were discussing an ants' nest. He is himself a member of a particular society, and a member of a particular class and profession within it. The first prerequisite for a relative objectivity is to realize that these facts make an absolute objectivity impossible.

Let us now consider our field of enquiry. The biological needs of human beings as individuals are air, water, a temperature within a certain range, food, and protection from violence and poisons on the one hand, and from parasitism by smaller organisms on the other. Given these, the individual can live healthily if not always happily or morally. If society is to go on, its members must reproduce, and in the long run births must balance deaths very exactly. (The closeness of the balance may be realized by the fact that a community which increased by 10 per cent per generation would increase ten thousand fold in 100 generations, while a 10 per cent decrease would reduce it to less than one thirty-thousandth.)

So much for mere existence. Society also demands a certain standard of quality in the individuals composing it. But here at once we get on to debatable ground. Do we want a population of athletes? Or is muscular development a waste of time for city dwellers? Do we want a high general level of intelligence? Or is not intelligence a handicap for those engaged in certain monotonous and menial tasks? These are not questions which the biologist as such can answer. But he can, at least, put them clearly to the politician, though he is most unlikely to get a clear reply.

Let us go over our primary needs. Almost everyone gets enough air, though it has to be forced down the shafts of collieries to reach coal-miners. The air of ill-ventilated houses and factories is dangerous, not because of the lack of oxygen in it, but because of the disease germs, dust, and other poisons. Similarly with water. Few civilized people die of thirst.

A great many die because their water supply has been contaminated with dangerous bacteria.

We keep the air next to our skin at a satisfactory temperature by means of clothes, houses, and heating apparatus. Thanks to these, men can live in every region of the earth. It is generally believed that climate plays a big part in shaping the various human races. In the last few generations climates have become more and more artificial. The climax is reached in North America, where, during the winter in many regions, the climate is arctic out of doors and tropical indoors. No human race has ever lived in such a climate before. Within a generation, the development of refrigerators should make it possible to cool houses in the tropics. This will give us another new and experimental climate.

Food is put to three uses in the human body. It is required for fuel, for maintenance, and for growth. The fuel value is measured in calories (heat units), and the amount needed depends largely on how much work is done. For fuel purposes one food can largely replace another. When it comes to maintenance and growth, about thirty different substances are needed in the food. Some of these are inorganic elements such as chlorine, potassium, iron, and zinc. Others are fairly complicated organic substances, including the so-called vitamins. When the fuel value or the amount of any of the chemical essentials falls below a certain level, we die. But this minimum level is often far below that needed for perfect health, and most people are somewhat short of one or more of the essentials. For example, most middle-class women in England are short of

iron, as shown by the fact that if more iron salts are added to their diet they make more blood. In the working class things are naturally worse.

We already know most of the essentials of diet, and can generally say whether a given diet is satisfactory or not. In another fifteen years our knowledge should be complete. And in industrialized countries most people buy their food instead of producing it themselves. It is thus becoming possible to ensure that everyone should have an adequate diet. But nowhere is the knowledge put into practice. The nation which first does so will undoubtedly raise the standard of its health to an immense extent. But such an achievement will mean the scrapping not only of our present wage system, but of the housing system which involves the provision of meals by each family independently.

Meanwhile, however, the view is generally held—and many who do not formally hold it, vote for it—that the provision of a proper diet is no part of the State's business. It is generally admitted that in England neither the unemployed nor the worst-paid workers can afford an adequate diet for their children, but it is thought that other forms of expenditure are more important than that needed to feed these children.

Industrial civilization brings with it a new group of dangers from violent death, in particular, factory, mining, and traffic accidents. On the whole these are being energetically dealt with, and they certainly do not occur on a scale large enough to be a serious danger to the stability of society. Violent death in war is another matter, which will be dealt with later.

In the past the principal check to urbanization has probably been disease. If men or any other animals are overcrowded, the spread of infection among them is enormously facilitated, and in any large town the death-rate can only be prevented from outstripping the birth-rate by artificial means.

Infectious diseases may be divided into four main groups. The organism causing them may be passed from one person to another by water and food, by insects, by contact, or by air. The list is not exhaustive, but covers most of the great killing diseases. Some may be carried in more than one way. Thus diphtheria can be transferred by milk, air-borne drops, or by such contact as kissing.

If a family lives on an isolated farm no great harm is done if their water supply comes from a well contaminated by their own sewage. A water-borne outbreak of typhoid fever can only arise from a visiting carrier, and will not spread beyond the family. But in a town with wells and no sewers, a single case of typhoid or cholera may infect thousands.

There are two methods of preventing such diseases. Water may be brought from an uncontaminated source, as in modern towns, or it may be drunk as beer, wine, or tea. Under the Roman Empire, almost every large town had a water supply brought by aqueduct, and this made a considerable increase in its size possible. With the destruction or disuse of the aqueduct the population inevitably declined. The universal consumption of beer did a great deal towards allowing populations to increase once more.

Insect-borne diseases include malaria, carried by the mosquito, typhus fever by the louse, and plague by the flea. The former is the curse of irrigated tropical lands, and probably accounts for the repeated conquest of their enfeebled populations by small bands of invaders from hill or desert countries where mosquitoes cannot live. The louse can be eliminated by frequently washing the body, and particularly the clothes. Bubonic plague is borne by rats, and is therefore not a menace in properly constructed houses where food is not left lying about.

We have not yet solved the problem of air-borne diseases, as was shown by the influenza pandemic of 1918. But we can very greatly check their incidence by diminishing overcrowding. Contagious diseases such as syphilis have been historically important, killing or maiming whole populations in the past. Where transmission is venereal, their spread can be prevented by chastity or antisepsis.

Until the nineteenth century, there were no rational means of preventing disease, and the fate of a civilization might be determined by an apparently trivial custom. Our traditions regarding cleanliness, which, according to the Freudian psychology, play so great a part in determining our psychological development, are in no way rational. They have rather survived by natural selection. Only in a culture where certain forms of cleanliness were obligatory could dense populations remain comparatively free from a large group of diseases.

If civilization is ever based on reason, the sight of a mosquito in a tropical country will arouse the same emotion as that of a decaying corpse, and we

shall be as shocked by overcrowding in our houses as by open sewers in our streets. Meanwhile, the tendency is rather to link up hygienic observances with the feelings of disgust at certain smells which are inculcated in infants. In consequence a good many so-called hygienic measures are thoroughly superstitious.

In a society with a given system of production there is a certain population in a given area which is better off than would be a smaller or larger population. The exact size will, of course, depend on the standard of well-being adopted. Thus a denser population might have a higher average income, but a greater death-rate from disease. It is worth noting that we cannot decide on an optimum population at present because the conditions of production and trade are changing so rapidly. London is probably over-populated as things are. But it would not be if the population were concentrated in skyscrapers, leaving room for broad streets and for numerous gardens and playgrounds. Germany is over-populated if it is to be economically self-sufficient, but could comfortably support a larger population if, like England, it traded manufactured goods for large amounts of foreign-grown food.

In the long run, as we saw, births must balance deaths very closely. In the past, a high birth-rate has balanced the high death-rate. During the nineteenth century, the death-rate fell earlier than the birth-rate, and the populations of most civilized countries increased enormously. The birth-rate has now fallen, so that, although the populations of civilized countries are generally increasing, the fer-

tility of women is not sufficient to keep up the population in the near future. That is to say, a million girl babies born in this year will have less than a million daughters unless they are, on the average, more fertile than their mothers. Where the population is not falling this is because of the large proportion of women of child-bearing age.

We do not know the reason for this fall. It is certainly not due entirely to contraception, as is shown by the fact that it began in southern Ireland, where contraception is almost unknown, earlier than in any other European country. But beyond question contraception is partly responsible. The fall is also due to the tendency to postpone marriage, but probably a great variety of physiological and psychological causes are at work.

Some fall in the birth-rates prevalent in the nineteenth century was needed if the planet was not to become a vast slum. But the compensation has gone too far. The present Italian and German governments have tried to check the fall in the birth-rate. The former has failed ; the latter succeeded during its first three years, but it is too early to say whether the birth-rate will not fall again to its pre-Nazi level.

One question of extreme interest, which will not be answered for a generation, is this : " Will industrialism be followed by a great fall in the birth-rate in the Soviet Union as it has been in Western Europe and America ? " If not, the Soviet Union is likely to dominate the world.

The most striking feature of the situation is that to-day we are as ignorant of the causes which govern

the birth-rate of a community as we were ignorant a century ago of the causes which govern its death-rate. Until we can control the one as we control the other, society will be a biological experiment performed on men rather than by men.

Men differ as regards their innate characteristics. Some for example are born blind, or with such a constitution that, in the existing state of medical science, they are destined to blindness. Others are born destined to idiocy, though once again it must be remembered that in many cases they could be saved from this fate if we knew enough.

Similarly, certain people are born with the capacity, in a given environment, to become powerful for good or evil. It is doubtful whether we can say that any particular innate disposition is always desirable. The combination of intelligence and aggressiveness may give a great constructive statesman or a bloodthirsty tyrant. We know that we do not want physical or mental defectives. We do not know what kind of innate characteristics we want. It is perfectly conceivable that a sudden rise of 10 per cent in the intelligence quotient of the rising generation in England would precipitate a bloody revolution.

In the same way we do not know how most socially important innate characters are inherited. Let us take the simple case of criminality. This often runs in families, and is generally associated with fairly low, but not extremely low, intelligence. Where a child follows its parent in a criminal career, this may have been due to an innate deficiency in self-control, or to an innate tendency to imitate the

parent, which, on the whole, makes for social stability. We do not know whether the child who becomes an intellectual if brought up in cultured surroundings would not have been a complete failure in a slum. And it will be the task of the psychologist rather than the geneticist to answer such questions as these.

It is, however, certain that different sections of the population reproduce at very different rates. The attempt was made in Hindu India to divide the population into a number of castes, so that occupation and social status were hereditary. Members of different castes did not intermarry, but they interbred to a certain extent. It is probable that innate abilities differ somewhat between different castes. A similar attempt is being made in some countries where different races live together. Thus, in South Africa and Australia, unions between Europeans and blacks are now forbidden.

A society of this type is really a compound of several different biological units. It is clearly a more precarious experiment than a society of the normal kind. Thus if one stratum of it increases more rapidly than another, the equilibrium will be upset. And unless supported by an *ad hoc* religion, as in India, it is likely to generate hatreds which will ultimately wreck it, unless the conquered race dies out, as may well happen in Australia.

Where the society is stratified into classes, but members may move from one class to another, things are rather different. Social rise or fall is at least partly due to innate characteristics. At present in most European countries, and in North America,

the poor breed much more rapidly than the rich, and this is not offset by their slightly greater mortality.

It is claimed by most eugenicists that, on the average, the rich are innately superior to the poor, and particularly so in those innate factors which make for intelligence. If this is so, the populations of most civilized countries are getting innately stupider. Similarly, it is claimed that ill-health leads to poverty, and thus selection favours ill-health. It is also obvious that war is dysgenic where conscription is involved, since congenital defectives, *e.g.* blind men and deaf mutes, escape.

It is beyond dispute that social success and biological success, in the sense of leaving a numerous progeny, are negatively correlated. In so far as social success depends on inherited factors, these factors are dying out. This state of affairs is not peculiar to our civilization. In mediaeval Europe the most admired quality, sanctity, involved celibacy. In the Soviet Union the communist leaders seem to have fewer children than the average. Lenin had none.

If in any society the hereditary make-up most favourable to carrying out the ideals of that society is gradually weeded out, the society in question must, it would seem, be biologically unstable. It has been claimed, without very adequate evidence, that the collapse of former civilizations has been due to this type of selection. As our own society is showing symptoms of instability due to other causes, this particular question need not perhaps concern us greatly to-day. However, any society which was

planned for stability would have to deal with this biological problem.

The solutions which have been suggested for the problem of the differential birth-rate seem to be mainly determined by the sympathies of their authors in the class struggle. Some have proposed that the drain of innate ability from the poorer classes should be checked by making a rise in the social scale more difficult. Others hold that the birth-rates of different classes would be equalized if the economic differences between them were abolished. It is perfectly conceivable that differential fertility of social groups might be ended either by a rigid caste system or a classless society. If so it must be considered on grounds other than biological which of these alternatives is the more desirable and practicable.

It is, however, by no means sure that the differential birth-rate is undesirable. It can be argued that a rise in the economic scale depends as much, or more, on factors making for aggressiveness than on those for intelligence, and that our greatest need is for individuals whose innate tendency is to be co-operative rather than aggressive.

The opinion is commonly held that only members of certain races can form a society of the highest type. Negroes, in particular, are often regarded as ineligible. Others take the view that all races are equal in their innate capacities. The evidence on either side is extremely slender. It is, however, notable that those authors who believe in the possibilities of dramatic changes in the innate constitution of a race by selection of its best or worst

members, commonly hold the view that racial differences are unalterably fixed, so that a negro people could not rise to European standards. This contradiction is readily explicable, since in many countries distinctions of race and class are associated.

A final problem arises in connection with war. It is possible that technical developments will render war so deadly as to become a real biological problem. It is not so at present. The available evidence, especially as regards India, suggests that the influenza pandemic of 1918 killed many more people than the World War, and in a much shorter time. As, however, human beings hate one another but do not hate filterable viruses, probably less than a hundred men are engaged in work designed to prevent future epidemics of influenza, while many millions are engaged in "defensive" preparations.

It may be, however, that before the contradictions which lead to wars between nations and classes are resolved by the establishment of a classless society and a World State, a large enough number of people will be killed in wars to destroy civilization as we know it. If this state of affairs is even approached, defence will become a biological problem. It will, for example, be as essential to protect cities against aeroplanes as against cholera, and the human race will burrow into the earth like so many rabbits.

Two things stand out, I hope, from this discussion. Most human problems are not biological problems. They are psychological, economical, or technical problems. And even within the biological sphere the questions which we ask, and the answers which

SOCIETY AS A BIOLOGICAL EXPERIMENT

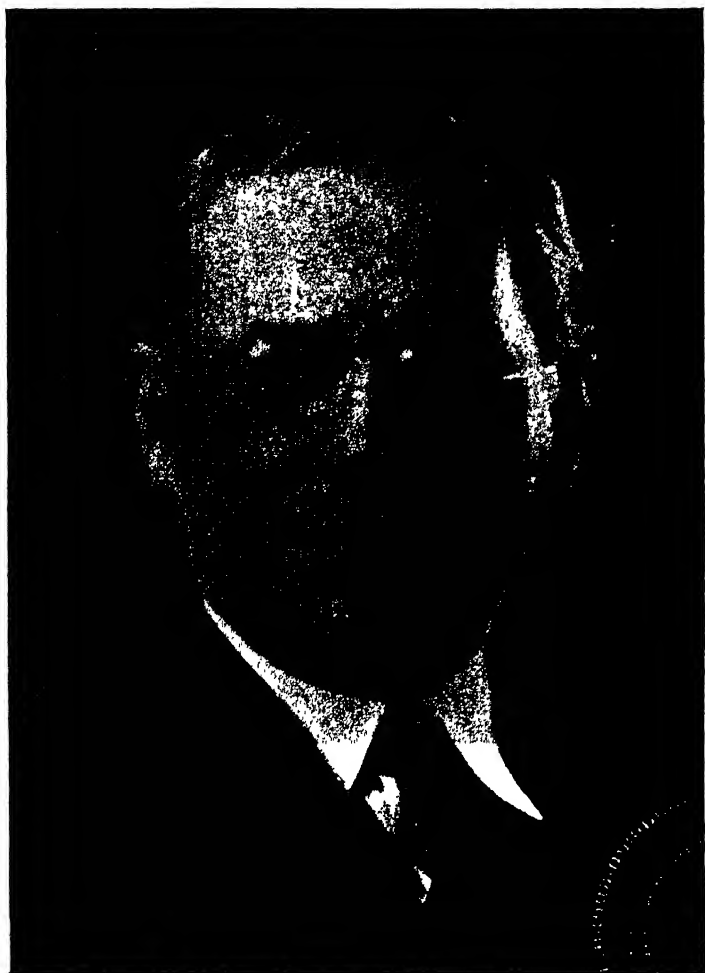
we get to them, depend on our economic and political orientation.

If the initial premise is correct that society is man's reaction to increased population density, it follows that the most fundamental problems of human biology are the problems of urban life. It is primarily by their success or failure as experiments in the organization of urban life that the various types of society which are now being tried out on our planet will survive or fall.

CHAPTER III

PSYCHOLOGICAL NEEDS

IN philosophy there has been for some time a tendency to make psychology "the" fundamental basis of all other sciences. According to this tendency logic is nothing but the psychology of thinking, mathematics nothing but the psychology of mathematical thinking, and so on. This tendency is usually called psychologism. Strong as the temptation of psychologism may be for the psychologist to follow its invitation and to take over control over all other sciences, it would be unwise to do so. Logic, mathematics, and all the other sciences are outside the field of psychology. The psychologist has to do only with other sciences in so far as the relationship of the individual to these sciences is concerned. A theory of mathematics is itself beyond the boundaries of psychology much the same as a theory of physics or chemistry or any other science. But even such sciences which, like sociology and economics, are more closely related to psychology, have a neutral nucleus which is not psychological in itself. The psychologist has to appreciate the position which exists for man politically, socially, economically, religiously, or in any other aspect, and has to



PROFESSOR D. KATZ

take it into consideration when dealing with psychological problems. As a psychologist he cannot change the atmosphere met with by the individual subject. It is the task of the politician to remove political handicaps when he thinks that this will help developing human faculties. It is the task of the religious leader to change religious institutions if he thinks that they have to be adapted to changes of modern life. Of course it is not forbidden to the psychologist to be active as a politician or as a religious reformer, but then he is more than a psychologist. For the psychologist there is only one task, namely to adapt the subject to the conditions of his surroundings and to help to develop it within the frame of the given circumstances.

Considering the great temptation which the psychologist may occasionally feel to apply his science directly to a problem which he comes across, the psychologist shares such a temptation with the doctor who serves his clients. The patient comes to him asking his help without bothering about the state of medical science. The patient has one life only, therefore the doctor cannot tell him frankly that there exists at the time being no remedy for his ailment and that he has to wait until something is discovered which may be considered a specific remedy for his illness. What will the doctor, who is aware of his responsibilities, do in a situation like this? Of course, he will try to apply those means which may bring a certain relief to his patient, but apart from that he will do his best to adapt his patient psychologically to the situation, *i.e.* to a situation which the doctor is not in a position to remove.

With this step the doctor willy-nilly becomes a psychologist.

The more the psychologist realizes the boundaries of his field and the more the public acknowledges these boundaries, the better will it be for the efficiency of the psychological worker and all sorts of disappointments will be prevented. The psychologist need not trouble about the boundaries of his work, for within these boundaries there is left room for work of immense importance. Particularly the new type of psychology which has been developed will be of special value in varied spheres of application.

During the last few decades a new type of psychology has developed. One characteristic of this psychology is that it is dynamic, whereas earlier psychology was almost purely static. Modern psychology talks about energies behind the stage of consciousness which bring about all changes of behaviour. Different terms are used for these energies, some psychologists speaking of instincts, others of drives. I, myself, prefer to speak of needs with reference to most of these energies, because this term is more neutral and does not involve any prejudice such as may be connoted by the term instinct. While the complex of needs imparts the main impulses to the individual (man or animal), I think we have to stress the neutral character of the psychophysiological equipment of the organism. The sense organs and their sensations, the whole motor equipment, takes part in that neutrality. Whether they are used for this or that purpose depends completely upon the needs of the individual. In them-

selves they are neutral, much the same as an aeroplane or another machine which can be used for the most different purposes.

For a psychologist who accepts this way of approaching human or animal psychology the whole field of psychology is threefold. One part deals with the complex of needs which are met with in men or animals. Another part considers the neutral psychological equipment of the organism. Finally we have that part which deals with objects in the surroundings of the organism which are aimed at by the needs. These objects are usually called values. In the case of hunger, food is sought ; in thirst, water ; in the case of cold, a warm shelter ; in the case of sexual need, the sexual partner.

We have to distinguish between innate needs and those acquired in individual life. The need to drink water for abating thirst is innate ; the need to drink stimulating drinks like tea and coffee, or intoxicating drinks like beer and liquors, is acquired. It is a matter of education whether a child comes to the abuse of intoxicating drinks, but nobody can live without water. There are people who under the special conditions of civilization have developed needs which have not any innate basis whatever. I refer to the hunger for drugs such as morphine or heroin. It is extremely interesting, from the psychological point of view, that new powerful needs can be acquired which, far from being useful to the body, actually endanger its physical and mental health.

If we speak about innate needs it does not mean that these needs are given immediately with birth or after birth. It only means that they are developed

by inner conditions. There are needs which are at work from the first day of life until the last day ; for instance, the need of food. On the other hand, there are needs, such as the sexual need, which begin to work at a certain age and disappear at a certain age.

Application of the aforementioned principles to the psychology of man or animal must begin with listing their needs. The next step is to find out the relative strength of those various needs. There is no other possibility than the measurement of the strength of one need by the strength of another. By comparing all needs which can be detected, we may hope to arrange these needs in order of urgency, beginning with the most important and ending with the feeblest one. We can call this order the hierarchy of needs.

In an animal it is comparatively easy to rank its needs in their order of importance. It is possible, for instance, to play off one need against the other, hunger against the sexual need, or against fear, and so on. That need which overthrows the other is the stronger. In this way one can, under set conditions, compare needs fundamentally with regard to their strength. In an animal it is not difficult to determine the resultant of different needs, operating simultaneously, and it is easy to predict the actual behaviour of an animal. The animal is essentially orientated towards the present, and hence its behaviour is determined by the needs here and now operating. The analysis of man's behaviour under the influence of his needs is much more difficult, because he frees himself from the present and his actions are just as

much determined by his innumerable experiences of the past as by considerations regarding the far future. He is consequently influenced by conscious reflection over his needs, and his actions are no longer solely determined by the present situation, as in an animal. Nothing marks the cultured man's emancipation from the force of his present needs so much as, superficially considered, his discovery of money or money-like mediums. These permit the postponement of the satisfaction and fulfilment of his needs to any other convenient time. However much greater the difficulty presented by the problem of need analysis in the case of man may be (for the reason given), certain things can, nevertheless, be ascertained by the methods at our disposal.

It is generally agreed that also in man those needs are the most pressing which he shares with other animals—we propose to call them the vital needs. They concern nourishment, clothing, and shelter. An analysis of household budgets testifies to the truth of this conclusion. In the case of a decreasing income, the expenses for vital needs, and among them for food, are as a rule the last to be cut down. If the income is rising, the increased expenditure follows the inverse order. Studies of the way of living of the unemployed are particularly revealing in this respect. These studies have also confirmed that those luxuries such as tobacco and alcohol which, physiologically considered, are superfluous, are actually very difficult to give up—a fact which is not surprising to the psychologist.

The vital needs serve for the maintenance of individual life, but man is a social being to such a

high degree that their satisfaction is also determined by social factors. Feeding habits and feeding standards are important factors in social differentiation. The assertive drive manifests itself also in a striving towards the adaptation of nutrition to that of the higher strata of society. One of the first acts of the French Revolution was the replacement by one type of bread for the four kinds which differed in their bran contents. Everyone tries to clothe himself so as to conform as best he can with the dominant fashion. People strive to live in those parts of the town which give them social repute, or at any rate are not detrimental to their social position.

In post-war years the striving after distinctiveness manifested itself in a novel way, hitherto almost unobserved, in the shape of 'beauty culture'. Alarmingly large sums are being spent for this purpose by young female workers; it comprises a large proportion of their earnings. One of the few new industries which remained unaffected by the crisis developed through the tremendous demand created by 'beauty needs'.

I propose to leave out from this general survey a treatment of other needs, such as artistic, religious, scientific, and sport. I prefer to point out certain general conclusions reached through the investigation of needs, certain laws apparently applicable to all needs, and the methods in which they are satisfied.

In a dynamic method of investigating needs, one of the first conclusions concerns their tension and relaxation. It is a general rule that the longer the satisfaction is delayed the greater the tension be-

comes. Complete satisfaction leads to a complete relaxation, which can be again recharged until maximum tension is reached, at intervals which vary according to the need. Certain needs exhibit a regular natural rhythm, others can be put into a rhythmic scheme. Needs of a lesser and greater degree bear an analogy to the taking of food only when appetite and hunger are present. Appetite is selective with regard to its means of satisfaction, whereas hunger is less so. Whenever the appeasing of a need passes the saturation point, a temporary or permanent surfeit may ensue.

There is close connection between the aforesaid and the law of the relative value of the satisfying means. A meal has only actual value for hungry persons, never for one who is satisfied. Only upon secondary consideration, under the influence of reflection over his needs previously characterized, does man adopt something like an absolute value of the satisfying means ; in the first instance this does not exist. Originally their valuation is dependent upon the organism at that particular time. Children who have not yet learned the value of money show this primitive attitude very clearly in their behaviour.

Substitution is closely connected with the law of relative value. The more hungry we are, the fewer the demands we make as to the nutritive or gustatory value of a dish. In times of war people work with substitutes, sometimes with even a substitute for a substitute. When we are lonely we accept people whom we would not consider if a greater choice existed. When no alternative reading matter is at hand, we put up willingly with a

poor novel. Amongst people who live under conditions of sexual starvation, such as prisoners, there are found unusual forms of sexual satisfaction. In all these cases the adequate means of satisfaction are being replaced by less adequate ones. It is frightening to observe how far people will descend in order to free themselves from a need's strongest pressure. Under normal conditions man likes a certain amount of variation in his means of satisfaction. No one will endure having the same dish offered him day after day. *Variatio delectat*. This, within certain limits, is true of all needs. Entirely new methods of satisfaction usually have an ambivalent character; on the one hand they attract, while on the other hand they are viewed with distrust. The final reaction depends upon the individual. There are persons who like to go in for adventures, whilst others are markedly conservative in the manner in which they satisfy their needs. Over and above the individual differences there seems to exist a general law of fashion. Certain values, for no apparent reason, seem to lose their efficiency in the course of time and are replaced by others; they can, however, be reinstated after some time.

The next section is concerned with a special problem of the psychology of needs, viz. that of nutrition. The public has lately shown particular interest in this problem.

The whole problem of nutrition is based on the fact that the human organism must receive a certain quantity of protein, carbohydrates, and fats. The three substances just mentioned, together with

mineral salts occurring only in small quantities, and with vitamins occurring in even smaller quantities, are present in the innumerable foods which man is in the habit of eating. There are the widest differences between the foods of one country or race and those of another, and yet man's appetite manages under normal conditions to ensure that he obtains from these various foods a sufficient quantity of the three basic substances—certainly a creditable performance on the part of what we usually describe as the nutritive instinct.

To supply the organism with requisite quantities of these three basic substances is in a sense the 'rational' basis of nutrition; and yet when food is being prepared this question is entirely at the mercy of the particular taste or preference which has been more or less 'irrationally' evolved by the nation or race concerned. The distinction which I have made between the rational and irrational aspects of nutrition is extremely important, because it will show exactly at what point we may safely attack existing habits in a systematic way, if, for any reason, such an attack should seem called for.

By means of a simple example I shall try to show the astonishing economic effect which differences of taste in different races can produce. During the last few years the export trade of Japan has soared to such an extent that many European industries can no longer compete with it for the world markets (consider, for instance, the Lancashire cotton trade), and this is partly due to the amazingly low prices which the Japanese worker pays for his food; these prices being low, not because the Japanese

workman goes short of food, but because his taste in food is much less expensive than that of the European worker. Even the Japanese are subject to the physiological law which necessitates the consumption of at least a minimum of our three basic substances, but they manage to obtain them in a much cheaper form. In Japan these substances are consumed in practically the same form in which they originally occur, such as rice, raw fish, and *nori*, a palatable seaweed which supplies additional protein, whereas in Europe they have to undergo a costly transformation, in that expensive vegetable products are used to feed beasts which provide the European palate with protein and animal fats in more acceptable forms. In passing, we may note the saying that in the industrial war now being waged a cheap battalion of rice (Japan) is marching against an expensive battalion of meat (Europe).

Not all differences in the food habits of different nations have any international effects, yet these differences are sufficiently important to merit the attention of the applied psychologist, whose work takes him into the realm of nutrition. Generally speaking, inhabitants of hot countries prefer a vegetarian diet, while in cold climates a meat diet with plenty of fat is the rule. Compare the Hindus, who are strict vegetarians, with the Eskimos, who dispose of enormous quantities of fish and seal meat rich in fats and blubber. These contrasts in taste and food habits are of course due largely to the different types of food available, but there can be no doubt that a psycho-physiological factor is opera-

tive as well. In all countries variations in climate bring about changes of appetite, so that in winter we need a greater amount of fats and meat, while in summer we prefer a lighter vegetarian diet. Yet even under identical climatic conditions quite different types of appetite can be developed, as is seen by contrasting the vegetarian régime of the Hindus with the mixed diet of the Mohammedan population of India.

The immense developments in the exchange of goods among the nations of the world has resulted in the consumption of both fresh and preserved foods becoming more and more similar in different countries; the production of foodstuffs has lost its national character. Nevertheless, there still exist differences in agricultural produce of the countries concerned, which are likely to be intensified by the growing tendency towards a policy of making each nation self-supporting. Germany, which produces a large quantity of rye, consumes much more rye bread than France, whose soil is more suitable for wheat. In England, with its comparatively large sheep-rearing industry, a great deal more mutton is consumed than in Germany, where the agricultural system is more intensive and does not allow much space for sheep-rearing. In maritime countries such as Scotland, fish plays a greater part as food than, shall we say, in Switzerland or Austria. In a country with large supplies of olive oil, such as Spain, butter is almost unknown. On the basis of these differences in raw material, tradition has built up still greater divergence in the matter of food. Many people have considerable difficulty in getting used to the food of a foreign country only a day's

journey from their own. It is a well-known fact that emigrants cling to their native foods: cases occur where the third generation still keeps to the dishes of the old country, even after they have long since ceased to speak its language.

Even though public taste is fairly uniform within a given nation, there are regional divergences which are worth considering. The people of England do not eat the same kind of food as those of Scotland, and in the North of England we come across dishes which are not eaten in the South. In Lancashire cow-heel and tripe are considered a sort of delicacy, but not so in London. In different countries there are unaccountable differences of taste with regard to fish. "Some of the fish which the English eat are intensely disliked by the Scots, who in their turn eat fish that are not relished by the English. The Scotsman rarely eats a mackerel and never eats an eel. The Scots fishermen indeed carry their dislike for eels so far that they do not even trouble to catch for the English markets the eels that abound in many of the Scots rivers" (*Manchester Guardian*, 1933). Many of these preferences are so strongly felt that they work out in practice like the traditional taboos, for example, forbidding the use for food of certain animals—dogs, cats, rats, mice, and so on.

A few words about the changes of food preferences which occur during the course of a person's life—a subject on which it is surprising that textbooks on physiology have so little to say. I studied the transformation of taste of 600 school children between the ages of ten and fourteen, and arrived at a number of interesting conclusions. In the earlier years there

is a marked preference for sweet dishes, fruit, confectionery, and certain meat foods such as sausages, along with a pronounced dislike for many other dishes such as soups, vegetables, fish, cheese, and various kinds of salad. The problem of changes in taste as the child grows is worthy of further investigation, and should be of great interest to the industries engaged in food production which cater for the very young, but not for those between childhood and manhood.

In my own experience, individuals belonging to the lower classes are on the whole less willing than those of the upper classes to give up their accustomed food habits, or to try new dishes on a menu. I have also noticed that in the lower classes there are a great number of individual dislikes for certain foods: fish in general, certain kinds of fish, cheese, and certain vegetables. This often leads to a greater monotony in eating, and in this case the monotony is not imposed, but voluntary. On the other hand, even between various social classes progress is going on, which we may perhaps call the democratization of food, which is rapidly tending towards uniformity. The decisive factor in this democratization of food is, first, the equalizing effect of international trade; secondly, mass production and mass consumption of preserved foods. Among the latter I also include mass-produced bread, which is really a preserved food, as some kinds of bread can be kept for months. It would be no exaggeration to say that a few thousand large bakeries are now providing bread for numbers of people who were formerly supplied by a hundred thousand bakers' ovens.

There are changes in taste which take place throughout a whole nation, sometimes slowly, sometimes with astonishing speed. The introduction of a foreign foodstuff can often have a revolutionizing effect on habits of eating. Consider, for instance, the introduction of the potato into Europe in the sixteenth century, or the cultivation of the sugar-beet during the last century. During the present century far-reaching changes in European nutrition have been brought about by the introduction of a wide variety of tropical fruits, and by the cultivation of the tomato on a very large scale.

Apart from changes of taste which are due to international trade, there are others less easy to explain. To these developments belong the increase in meat consumption which was noticed in many countries before the war, and also the adoption of wheaten bread instead of rye bread. Neither of these changes can be explained on physiological grounds. One of the changes of taste having taken place recently which is of special interest for the English public is that concerning the decrease in the sale of bread.

For many years, and especially during the last decade, the sale of bread has been decreasing. The population in general consumes no more than a few ounces per head a day. What factors have contributed to the decreased consumption of bread as a backbone of the English population? The problem has important economic, commercial, and political bearings. Here we are chiefly concerned with the psychological aspect.

Some people would suppose that the decrease of

income in consequence of the economic crisis has induced those circles suffering mostly from the crisis to reduce their expenditure on bread. But we can hardly accept such an explanation. It is generally known that in times of economic crisis people first endeavour to reduce their expenses for the luxuries of life, and that the expenses for nourishment are reduced last of all.

It probably seldom happens that people eat particular food because doctors tell them that certain foods are good and some should be avoided. The determining factor, apart from financial considerations, seems to be—tastiness, flavour, palatability. In a recent statistical investigation it was found that although the amount of money spent per head on food increased with increasing income from the very poorest, who were badly under-nourished, to the very prosperous, who were adequately nourished, the expenditure per head on bread was almost constant and independent of income. In other words : rich and poor alike eat as little bread as possible. Even the badly underfed preferred to spend some of their income on the more expensive but less nourishing 'tasty' foods rather than on the cheaper but more nourishing energy foods. Apparently they buy and eat the food they like, and not the foods they ought to like. And this in spite of the fact that bread is amongst those foodstuffs which have profited to a high degree by what we have called the democratization of the nation's nourishment. Even the poorest man shares with the richest advantages resulting from modern methods of large-scale flour production and bread-making.

From the physiological point of view, too, bread such as is made in England represents food of a very high nutritive value which is at the same time comparatively very cheap. Therefore one could imagine that in times of economic strain that part of the income which is spent for bread would not decrease, but on the contrary would increase. Apparently such is not the case. Seemingly one does not buy food for its nutritive value but for its tastiness, and since bread is not amongst those food-stuffs which possess attractive flavour, even poor people seem to buy less and less bread and more and more of the tastier foods.

Presumably other factors in addition to economic ones have operated in removing bread from the privileged position which it held in former times. The great variety of new and tasty foods (*e.g.* sweetmeats and sugar confectionery, breakfast foods, fruit like bananas, oranges, and grape fruit) now popular is as much a psychological phenomenon as an economic one. During the years after the war, too, a new ideal of beauty of the body has been developed, namely that of slenderness. This ideal, linked up with the spreading of sport and physical culture all over the world, has been propagated in an extremely effective way, *e.g.* by film stars who have paid homage to it amongst the millions of young people crowding the picture-houses. This new ideal asked for a diet which left the body slender, *i.e.* apart from the quantitative reduction of amount of total food consumed it required the dropping from the diet of foodstuffs which were supposed by some writers to have

fattening properties, and more particularly those rich in fat and carbohydrate. However, those following the new ideal of slenderness were less ready to abandon certain foodstuffs which were at the same time means of enjoyment on account of their taste, such as candies, sweets, and strongly sweetened tea. The consumption of these has increased very markedly since the war. This factor is important because one might infer that, in the case of bread too, an improving of its qualities of taste and flavour might overcome at least some of the difficulties which, rooted in the new ideal of slenderness, hamper its consumption.

During the last few years certain new sorts of cereal foods such as Ryevita have been produced which seem to appeal more to the modern taste, and which at the same time pretend to be less dangerous to the ideal of slenderness which has been developing among a section of the community. But as a matter of fact it may be doubted whether they can compete seriously with ordinary bread, since they are much too expensive to be purchased by the mass of the population. Similar considerations apply to the various proprietary breakfast foods made from wheat and other cereals. They are extremely palatable and "nice to eat", although they are much more expensive than their real value would justify. The main point is, however, that they are chosen for their tastiness, and the flavour of such foodstuffs is worth consideration in any study of the flavour of bread.

Ministries responsible for the provision of food have to watch and make suitable allowances for

tendencies in public taste. They have to decide whether, as part of their food policy, they should yield to these tendencies or put the brake on them. Where a positive decision is made, it means either that home agriculture will have to be adjusted on the lines desired, as far as climatic and other conditions allow, or else that import trades will be affected in some way. Against undesirable tendencies in public taste suitable propaganda can often be effective. A government has it in its power, moreover, to bring about changes in public taste on its own initiative if it wishes to ensure a wider sale for some home product. Not only governments, but also the farming industry, food trades generally, and food manufacturers and catering establishments in particular, need to keep an eye on changes of taste.

Enough has been said, perhaps, to suggest the wide scope of the subject. There can be little doubt that scientific enquiry in this field of research and systematic application of the results would lead to healthier and wiser living all round. It is the purpose of this book to show that if this objective is to be attained in its broadest sense, then all the social sciences must be organized in the same way. Only by uniting efforts can scientists and society achieve that social betterment which is their common end.



DR. A. S. J. BASTER

CHAPTER IV

ECONOMIC PLANNING

To the cloistered scholastic interested in intellectual activity for its own sake the social sciences can offer attractions as rich as those of any other body of human knowledge ; and this not improbably accounts for the fact that some economic controversies have a somewhat unreal and remote flavour, and tend to be classed in the public mind with the celebrated mediaeval disputation about the number of angels that could stand on the point of a needle. The plain man, however, expects scientific enquiry to justify itself ultimately not by the ecstatic pleasures afforded to a few intellectuals by exercises in pure logic, but by the general benefits which will flow to all from the application of science to the problems of life ; a justification not in terms of theories, but in terms of works.

However intolerantly this prejudice may be regarded in the natural sciences, where the search for apparently remote and abstract truths has often had the most astonishing practical results, yet it is difficult not to feel sympathy for it as a directing force in the social studies, where the *application* of the conclusion of such studies is the touchstone of their

usefulness. For here the very stuff and matter of the investigations is woven from the facts of common experience ; here the enquirer is face to face with urgent human problems which have been crying out for generations for a solution ; and here the successful workers will be those whose scientific ability is reinforced and vitalized by keen social sympathies and a deep insight into the sad catalogue of human discontents. In economics, the demand for practical remedies is particularly imperative ; the science itself arose out of controversies over the intensely practical problems of public finance during the first Nationalist epoch in European history ; and ever since, its progress has been most rapid and continuous when practical economic questions forced themselves irresistibly into the forefront of popular discussion.

It has often been said that the economic system, defined as the set of rules that people make to regulate their dealings with one another when they get their living in groups instead of working as isolated individuals, is the creation of human decisions and can therefore be altered by them. The decisions which laid the foundations of our present economic system were clearly not so well considered or well informed as they would be to-day, because economic science was then in its infancy and could not help people much in tracing out all the implications of the rules which they then decided to adopt. The present system, therefore, based on the institution of private property and freedom of contract, was adopted not quite in a fit of absence of mind, but certainly with a wholly inadequate consideration of

its implications for the welfare of the individuals who had to live under it. And it was not long before unexpected difficulties began to appear, particularly at the time of the Industrial Revolution in England in the eighteenth century. It was obvious that the rules worked incredible hardships on large numbers of people, though the national wealth increased considerably at the time. Piecemeal efforts were made to amend them during the nineteenth century, whilst their general import was becoming clearer as the range and power of economic analysis slowly increased. At the present time, it may be safely said that their operation is well understood in principle, and far more is understood about their detailed practical implications than was the case even twenty years ago. Moreover, it is now possible to study them comparatively, since several very different sets of rules are in force in other countries. In short, it now seems possible to begin drafting the rules of our economic system *consciously*, instead of uncritically accepting those thrust upon us by circumstances, as our forefathers seem to have done.

Poets, who do not normally concern themselves with the ways people make a living, and theologians, whose interest is in the life Hereafter as a compensation for present woes, might say that the present set of rules suits them well enough. But most ordinary folk are only too well aware of their scandalous shortcomings. If this is the case for economic planning, that the rules of the system do not work well, then it must be universally conceded at once. For the present rules produce fantastic disparities of wealth between rich and poor, leading

to outrageous extravagance and a dangerous concentration of economic power in the hands of a few. They produce immense recurrent fluctuations in prosperity, so that in good times business can be run profitably by the most flagrant incompetents and all kinds of ill-conceived ventures are embarked upon, whereas in bad times the productive machine runs at but a small fraction of its capacity and the society is burdened by the monstrous waste and misery of involuntary unemployment. And they produce the most glaring contradictions of poverty in the midst of plenty, when, as recently, consumers willing to work but unable to find a job have had no money to buy the surplus wheat of impoverished farmers willing to sell but unable to find a market.

It is a little disconcerting that most popular critics stop at this point. But it is clearly not enough to prove that the present rules work badly ; it is necessary to take a positive stand as to the kind of result that we want the rules to produce. And this brings us to the heart of all economic doctrine at once ; for it is an axiom of this uncomfortable and depressing science that once people have decided what they want the economic system to produce it will be found that there is *not* enough of everything to go round, and that the various products and productive agents employed in the system have got to be *economized*. Whatever *result* we decide upon therefore, there must be some systematic way of reaching it, whereby the resources of the community are distributed to the various industries in the proper proportions, with due regard to the need for the products of those industries. For example, there are

quite certainly methods of building houses which are technically much more efficient than those we now employ. And if capital and labour were free, our "result", if it included, say, a four-roomed house for every family in the population, might be effectively achieved by the use of just those methods. Unhappily, however, capital and labour "cost" something, or, more clearly, they are scarce things which are wanted for a wide variety of strongly competitive uses, of which house-building is only one. House-builders can offer only a limited price for the service of these productive agents, because they know the consumer won't pay more than a limited price for the houses. Thus the quantities which they can obtain will also be limited, and technical improvements in the methods of house-building may very well be held back sometimes by a lack of labour and often by a lack of capital which is wanted more urgently somewhere else.

From this illustration, two principles of the present system of rules stand out clearly. One is that the "result" aimed at is that the great body of consumers should get their wants satisfied in order of urgency; the other is that the directing force which parcels out the community's limited resources to different industries is the price system. If consumers want radio sets very urgently, they will get them; and they will get them because the urgency of their desires will be reflected in high prices, which will tempt resources out of other uses into the making of radio sets until the demand is satisfied. There is nothing sacred about either of these principles of course. Consumers (as in Russia)

may be obliged to take what there is, instead of being allowed to choose amongst competing producers and make their choices effective in market prices ; and there are other ways of economizing resources (though these exist only on paper) than by the operation of a competitive price system. But the enthronement of consumers' choice as the " result " at which the rules of the economic system should aim is very secure, and its complete overthrow would probably be temperamentally repugnant, to say the least, amongst the Anglo-Saxon peoples. Moreover, the price system is a convenient economizing device, whose replacement would necessarily involve *inter alia* a simply unprecedented confusion of administrative problems.

As a practical issue, therefore, economic planning in this country involves not the entire recasting of the rules, but the acceptance of the broad principles which they express and a pronounced disposition to modify their results or even adjust the rules themselves where their application involves obvious hardship or waste. Nearly everybody would go a long way with the planners. For instance, many consumers want things (*e.g.* drugs) which society decides are not good for them ; more important, the bulk of consumers cannot be persuaded to want certain essentials (such as health and education) without which the very existence of the community would be imperilled. In the first case the rules must be altered, and the sale and consumption of dangerous drugs controlled ; and in the second case, the results must be interfered with. Government must provide a service which the market unaided

would produce in socially inadequate quantities or not at all.

The chaotic condition of the world economic system since the war, however, has emboldened the planners to claim a much larger scope for their activities. New conditions have arisen ; the pricing system does not work so freely as before because some elements in it (especially wages) are now fixed by authority at a level which is thought socially desirable rather than economically feasible ; resources are now moved with some difficulty from one use to another, because the firms controlling them originally are now much larger and take an unconscionable time dying, and because the rapid transfer of labour is hindered by a socially necessary unemployment insurance system ; and finally, world market conditions are now so profoundly affected by the arbitrary decisions of nationalistic governments that our own economic system needs some protection against sudden external changes which a free pricing system would not give. There is undoubtedly considerable substance in this sort of contention ; logically, the case for a much more drastic modification of the rules than has ever been attempted before seems to be strong.

The historical evidence is a little embarrassing ; and stalwart planners of all schools are often disconcerted by the discovery that the principal historical parallel for their activities is to be found in the later Middle Ages, when, in the name of national aggrandisement, industry and trade were subjected to the most minute regulation by the central government and by groups of tradesmen themselves. It

was, in fact, the reaction against the fantastic excesses of this system for which Colbert, the Minister of Louis XIV, was responsible, that led to its replacement by the present one, at the time when all social relations were being dislocated by the tremendous impact of the Industrial Revolution in the eighteenth century. But the planners can always argue with considerable justification that with the rebirth of their creed at the end of the nineteenth century the advance of scientific knowledge, both of the physical world and of the social world, has emancipated them from the cruder errors of their intellectual forebears. In the sixteenth century, for example, Henry VIII solemnly affirmed that "vitayll being a necessary subsistence for the bodye should not be esteemed at the seller's libertie, lest he should abuse his merchandise and enforce men for want to buy at his price". And an elaborate system of regulations was devised for the market in corn. We may gather from the Wheat Quota Act of 1932 that the Wheat Commissioners of the twentieth century harbour somewhat similar views. But we are assured that their means for putting them into effect are as much of an advance on the egregious blunders of incompetent Tudor monarchs as the Flying Scotsman would be on the stage-coach.

Another very significant if not ominous historical fact is that, in modern times, economic planning has had its largest opportunities in practice during war-time, when what one would normally consider the socially valuable preferences of the community have to be ruthlessly sacrificed in the interests of victory, and when long-term social policy ceases to have

much meaning and enormous and inevitable wastes occur which in business would be simply intolerable. *Pace* those planners who suggest that the war-time organization of the economic machine ought to be carried over to peace-time, it is remarkable how quickly after 1918, people, in Anglo-Saxon countries at least, decided that this was exactly what they did *not* want.

Before the war, the social services may be said to have been "planned" to some extent; that is to say, people thought ahead about the future needs of education, of poor law relief, or of roads, for example; and in some countries (notably Germany) the utilization of urban land for industrial or residential purposes was also made a matter for Government authorities with an eye on the future, whilst in others (notably the United States) great public movements developed for the conservation of natural resources by the Government for the sake of future generations. All these activities naturally impinged upon the business world, but it is hardly proper to speak of much authoritative planning of business itself until after the war. It is true that a number of giant industries in positions of monopoly or near-monopoly (such as the railways in Great Britain, or the public utilities in America, or the potash syndicate in Germany) were subjected to Government regulations of increasing stringency, but this was rather with the object of trying to replace the stimuli of competition by Government edict than of deliberately planning industries for ends which the competitive system would not serve. Since the war, however, the direct authoritative regulation of all

kinds of business has occurred, which without involving the complete *Planwirtschaft* of Russia or the almost equally iron-bound systems of Fascist countries, yet subjects large areas of the competitive system to some sort of external discipline.

Roughly speaking, it may be said that post-war economic planning follows three main types. First, that which aims at correcting the lapses of the competitive system ; secondly, that which purports to organize industries alleged to be " technically " unsuitable for competition ; and thirdly, planning industries for some social purpose which would be inadequately served by the competitive system. In the first class there may be placed, as of primary importance, the attempts of the American Federal Reserve System and the great European Central Banks to damp down the swings of the " trade cycle ", with what success is unhappily only too obvious from the economic history of the last seven years. Here also will figure the exchange devaluations since 1931, and the various schemes for manipulation of the currency justified by reference to the " breakdown " of the economic system ; schemes for the international control of raw materials, as for instance, the Stevenson scheme for rubber restriction, the Chadbourne plan for sugar, and the Tin Producers' Agreement of 1931, all predicated upon the " ruinous " nature of world competition in these staples ; the great mass of tariffs, quotas, clearing agreements, blocked exchanges, barter agreements, and exchange equalization funds, introduced on account of the " breakdown of the exchanges " ; and a great number of costly and not always useful

public works, undertaken in various Western countries with the idea of "priming the economic pump", which, as was discovered during the almost universal paralysis of business in 1932, can hardly be called a self-starter.

It is obviously impossible to pass a general verdict on these schemes within the limits of this chapter; but even the most casual newspaper reader can hardly have failed to notice the singular fact about this sort of planning, that it was very common *before* the great economic depression of 1929 as well as after it; and that consequently there may be something in the argument that it was the over-hasty therapy of the planners after the war which multiplied the functional disorders of the competitive system and *brought about* the tragic climax of 1929—further doses of the same medicine being liable to aggravate the disease. Although this generalization is, of course, much too sweeping, few competent and impartial persons could deny, for instance, that the general throttling of international trade after the Hawley Smoot Tariff in 1930 and the subsequent reprisals to it must have had serious effects on the general standard of living throughout the civilized world, whatever other ends were supposed to have been served in the protectionist countries concerned. This is not at all to deny that the disorders of competition (particularly those connected with the so-called "Trade Cycle") do call urgently for a remedy. It is merely to point out that present-day efforts to remedy the failures of the competitive system appear to have done considerable harm as well as good, and that there is a real

danger that, whilst the public continues to be badly informed on economic questions, sectional interests will continue to exploit popular ignorance in the interest of economic "plans" which serve their own particular ends.

There is of course no reason why society should not make a present to particular interests if it sees fit. In this country, for instance, producers of sugar-beet are directly subsidized by the State, and in the United States under President Hoover, the Grain Stabilization Corporation paid out some five hundred million dollars to American farmers by buying their products at a high price and selling them subsequently at a heavy loss. In such cases the public commitments are known, and the case for some practical measure of public sympathy with the wheat farmers of East Anglia or of Kansas can stand on its own merits. It is otherwise with the so-called planning schemes which are little else but concealed bribes to economic groups, whose claims for assistance would not bear public examination and whose incomes are increased in ways which involve obscure economic wastes and unnecessary burdens. The principle of the late lamented N.R.A. scheme in America was certainly that each industry should "plan" its future development in the public interest under the supervision of the National Recovery Administrator appointed by the Federal Government; in practice it merely facilitated the formation of a number of monopolies by which the workers and employers in certain industries generously granted one another higher rewards at the expense of the consumer.

In England, the drift towards this sort of industrial planning (because of the alleged evils of "excessive" competition) is clearly perceptible in the power to compel amalgamations granted to the Coal Mines Reorganization Commission under the Act of 1930 for instance, or in the price-fixing powers given to Marketing Boards under the Agricultural Marketing Act of 1931. In the absence of competition, it will be no easy matter to ensure the constant fidelity of these bodies to their main responsibility—that is, the public welfare, rather than to the interest of their particular industry. It seems well to insist that, if producers are to be helped because of a temporary failure of the competitive system, it is better to raid the Exchequer and call it a subsidy than to tax the consumer, maintain inefficient producers and industries in business, and call it economic planning.

A great many of the temporary failures of competition may not unfairly be ascribed to the effects of the war, particularly the baneful influence on international trade of the drift towards economic nationalism. If the prospect of another international war continues to be as good as it is at present, it is hard to see how this tendency can be arrested, with all of the sacrifice that this implies of the high standards of living of the great trading nations. Each country, faced by arbitrary restrictions on international trade imposed by its neighbours in the interest of self-sufficiency or national prestige or tortuous diplomacy, will feel bound to retaliate similarly. More and more of the economic system will then have to be "planned", but hardly in the sense and under

the conditions which most intelligent planners would wish. If the nationalistic fever can be abated in some measure by the appropriate political action, then the temporary "breakdown" of the competitive system will largely cure itself.

Much more serious in their significance for a peaceful world are the permanent defects of the system, of which the chief one so far not amenable to treatment is the liability to the periodic convulsions of the Trade Cycle. In this field, however, very great progress has been made in recent years, and a convincing explanation in monetary terms seems at last to be emerging, on the basis of which practical remedies are now being elaborated. A plan worthy of special mention in this connection is the Chicago scheme for "100 per cent money", which effectively blocks the creation of money by banks and promises a lessening of the violence of trade fluctuations if not their complete abolition. Very thorough studies are now being undertaken of the lesser shortcomings of the system. The fact that farmers, for instance, respond much more slowly to the usual economic stimuli is not due to traditional bucolic lethargy so much as to the great length and technical rigidity of the production process in agriculture, which has tended to exaggerate shortages and gluts of farm products in the past because the farmer could not adjust his output quickly enough in response to price changes. The planning of A.A.A. in the United States was in part predicated on the necessity for speeding-up this adjustment. In the electrical industry, competitive generating stations would involve the wastes of a low

average load factor for each station because of the impossibility of storing current. "Super" power stations for very large areas might be produced under competition, but their size would open the way to monopolistic exploitation. There is thus a good case for authoritative planning of the industry as in England, where Electricity Commissioners have been appointed by the Ministry of Transport to construct the national "Grid". The extraction of petroleum is another business which, to judge from American experience, seems unsuitable for ordinary competition. Natural gas and oil flow towards regions of lower pressure in utter disregard of property rights; and the law of capture establishes ownership only when the product emerges on the surface. The leasing system adopted forces the lessee to drill and pay royalties in order to retain his rights; but the competitive drilling thereby induced often causes the premature encroachment of salt water and the dissipation of the natural gas pressure required to force out the oil. A clear waste of mineral resources results. It is obvious that the peculiar technical conditions of the electric power industry and of petroleum extraction are good grounds for belief in the desirability of planning in special cases.

Planning industries for "social" ends can obviously cover schemes of such varied intention and of such varying worth (if one can speak of objective standards of social benefit at all) that generalizations about them would not be informative. Here the most useful contribution of economic science (which is not competent to pass judgment on social ends as such) would be in its argument of the implications

for the rest of the economic system of a given social policy. Perhaps the most completely planned socio-economic experiment in any of the capitalist countries is the Tennessee Valley Authority, whose main function is to bring the benefit of cheap electrical power to the poverty-stricken and backward population of an enormous river basin covering some 40,000 square miles. The supply of power at subsidized rates for the social purpose of rebuilding a rural slum will clearly have far-reaching economic effects on the localization of industry in near-by areas, the internal migration of American workers, the rates of wages in the occupations now followed in the Valley, and the fortunes of privately-owned power companies situated there, to mention only a few of the more obvious reactions. Information thereon will not necessarily be decisive for policy, but will be essential in formulating it. It is now apparent that fuller advantage might have been taken of this information to avoid mistakes.

This sounds an appropriate note for the summary by way of a conclusion to this chapter. Complete planning would involve for the Western countries an excessive degree of regimentation and nightmares of bureaucratic organization. Partial planning has probably saved the economic system from complete collapse in the recent depression, though it probably helped to precipitate the difficulties. Some forms of partial planning are generally conceded to be socially desirable, and some remedy must be planned for the known shortcomings of the competitive system. If only it can be carried on without political fear or favour, partial planning has obviously immense

potentialities for social good. But its limitations in practice are severe. It cannot be undertaken by one country in a competitive world without serious risk of loss ; its reactions on the rest of the interdependent economic system are generally very complicated and as yet imperfectly understood ; and its ultimate effectiveness and acceptability depend on a skilled and impartial bureaucracy really responsible to the representatives of the people.

There is no doubt that most of these limitations can be substantially relaxed by a method of treatment which has so abundantly justified itself throughout a vast range of problems in human experience. This is the method of patient investigation by impartial observers trained in the discipline of science. At present it is obvious that the enthusiasm for economic planning far outruns the knowledge of its practical possibilities and its reactions on the economic system. The urgent necessity for the widest possible dissemination of fundamental economic doctrines and of the results of current economic research appears more clearly in this than in any other great public issue of modern times.

CHAPTER V

PSYCHOLOGY IN THE INDUSTRIAL LIFE OF THE NATION

ALTHOUGH Psychology, or the study of Mind, has exercised the wits of philosophers from Aristotle onwards, it is only during the last few decades that mental functioning has been studied experimentally. Barely half a century ago the first systematic experiments in Psychology were made, but in the years between the amount and scope of research in this field have increased rapidly, so that at the present day there are few aspects of mental life which are not being experimentally studied. In the early years of the present century the knowledge acquired by this young science began to be applied to some of the problems of industry, and with such encouraging results that the sphere of industrial application became greatly amplified. Conclusions reached in the laboratory were tested on larger and more varied groups in the field, and observations in the latter provided new lines of research in the former. At the present time there is almost no human problem in industry which has not been studied to some extent by the industrial psychologist, so that any account in a single article of the activities of this



E. CHAMBERS

Reproduced by kind permission of Messrs F. A. Swaine, Ltd

PSYCHOLOGY IN THE INDUSTRIAL LIFE OF THE NATION
new branch of science must of necessity be rather sketchy.

The following description of Industrial Psychology is written not from a chronological standpoint but from the point of view of the logical development of the subject. Much of the early work in this field was essentially sporadic. Small portions of the jigsaw were identified and fixed whilst the whole picture still remained little more than the vision of the experimentalist. Hence the chronological presentation of research and discovery would lack the logical cohesion necessary to a true understanding of the aims and scope of Industrial Psychology. This account will be based, therefore, on the career of an imaginary worker, starting from his last days at school and scaling with him the industrial ladder, pausing on each rung to view the appropriate activities of the psychologist.

Imagine, then, a boy, shortly to leave school and embark upon an industrial career. He is endowed by Nature with certain abilities and aptitudes, some of them still latent, others of them made manifest by environment and polished by pedagogy. He may be cheerful or sullen, attractive or repulsive, full of eager zest for life or cringing from reality into murky yet tolerable fantasies of his own. Whatever his nature, he usually needs help to find the first rung of the ladder which shall lead him either to the status of a good citizen, or to that of an economic misfit, or even to that of an embittered revolutionary. Soldier, sailor, tinker, tailor—what shall he be? It is one of the most important questions the boy and his advisers will ever be

called upon to settle, for no one will deny that a congenial occupation is one of the fundamental sources of happiness. As Francis Bacon wrote : " They are happy men whose natures sort with their vocations ".

Until recently the ways in which this important question of vocation were normally solved were rather crude. The boy might choose a particular trade because his parents wished it, or because he had a friend in that walk of life and wanted to be near him. He might choose an occupation through sheer ignorance that other and possibly more suitable employment even existed, or because his reading and teaching had thrown a romantic halo around some calling. He might even have to exercise Hobson's choice, since only one occupation was open to him in the place where he lived. These methods of choosing a vocation may be successful in some instances : they are certainly not universally successful. To use an old phrase, far too many round pegs in square holes result from these haphazard methods of choice. In the hope of decreasing this number of vocational misfits, the industrial psychologist is now attempting to guide the boy rationally in his choice of a career. This he does by means of psychological tests and interviews, the former designed to reveal what aptitudes and natural propensities the boy possesses, the latter to throw light on his interests, ambitions, and social background.

In this type of investigation the careers of the boys tested and interviewed are followed as far as possible. Their satisfactions and dissatisfactions,

expressed or divined from their behaviour ; their suitability in particular occupations and failure in others—all these points are recorded and correlated with their test performances and the results of the interviews. By this means the value of psychological methods of guidance into vocations is being assessed. Certain advances along these lines have already been made, but the problem of vocational guidance is still the subject of extensive research. We cannot at this stage, therefore, judge what will be the ultimate value of the scientific guidance of occupation choice.

Turning now to the reverse of the medal, we have to consider the employer's point of view. He, on his side, is faced with the problem of choosing suitable workers for the particular tasks under his control. Here, too, we find that haphazard methods of selection have held the field until comparatively recently. In some cases the demand for workers of a certain type equals or exceeds the supply, so that the employer is forced to engage all applicants, frequently discovering that he has to discharge some of them after a short experience. In cases, however, where there are more applicants than positions—and these, of course, are in the majority—the employer can exercise a choice. He may do this by relying on his own judgment of character, by accepting a schoolmaster's recommendations, or by taking on certain applicants merely because he likes their appearance. These methods may have their value, but it has been found that the psychologist may be of help to the employer in the selection of workers for particular occupations.

By analysing the mental and physical qualities involved in different occupations it has frequently been possible to devise tests to discover how these qualities are distributed amongst the applicants. By comparing performances in these tests with the subsequent trade proficiency of those tested, a measure of the value of each test is obtained. This indicates which tests are most useful in selecting applicants for a particular occupation, and workers chosen by this method are better equipped for their work than others chosen by random methods. The chief sphere of utility of vocational selection of this type is in the skilled trades or in trades where there is repetitive work which is capable of being analysed into its elements. Attempts are also being made to devise more purely psychological tests for selecting foremen and even managers.

The tests used by the vocational psychologist may be grouped broadly under two headings. First there are general tests, which purport to measure fundamental qualities such as intelligence, mechanical ability, eye-and-hand co-ordination, and the like. Second, there are the so-called analogous tests. These attempt to reproduce a situation similar to that which the worker will encounter during his work, and their value depends on the assumption that the person who makes a good performance at these tests will also tend to be good at the task imitated by the tests. There is doubt as to the true value of analogous tests; in some cases they have yielded very useful results and are a definite aid to vocational selection; in other cases

the inevitable differences between the test and the task seem to outweigh the similarities, so that in these instances very little relationship appears to exist between success at the tests and success at work.

We will now assume that our imaginary young worker has been wisely guided into his vocation, and has been selected by his future employer as likely to make an efficient worker in the particular kind of occupation he has to offer. The boy is now faced with the necessity of learning his new work. At school he has been taught to do arithmetic and to write some sort of a composition, and has learned a number of more or less useful facts about history and geography. He may be able shamefacedly to stammer a few words of French with a strong English flavour, and may even know a little about joinery and metal-work. One thing is certain—except in rare cases he will not have learned nor practised the particular task which he will have to perform in his new sphere. At this point again the psychologist may be able to help him.

The old method of teaching industrial processes was for an experienced worker to show the newcomer how he himself performed the operations, and for the learner to imitate the old hand as well as he was able. Investigation showed, however, that experienced workers did not all perform the same task in the same manner nor with the same efficiency, and intensive research was carried out to determine the best ways of performing different industrial tasks. In this investigation two methods, known as Time

Study and Motion Study, have been widely used. These two methods have been employed with radically different aims by "efficiency engineers" in America and by industrial psychologists in this country. In America Time Study consisted in carefully noting the time taken to perform each portion of a cycle of movements by the quickest workers in a certain piece of work. From these timings a new time standard for the complete task was calculated and established as the desirable rate of working to be attained to by all workers as far as possible. Those falling short of this standard were penalized. Although production was thus naturally quickened, this way of securing speed of output was scarcely conducive to the comfort of the workers. The method applied in this form did not find favour with the psychologists in this country. They too have used Time Study, but with a different end in view from that of merely increasing production at all costs. It has been used in this country in conjunction with Motion Study to determine how far the different constituent movements in a cycle of movements were really necessary, and to what extent time was being spent on more or less unproductive operations. In actual fact a surprising number of movements were found to be unnecessary in many operations, even in some of the simpler tasks such as sweet-covering and packing, and by cutting out these unnecessary movements wherever possible, new methods of performing old tasks were devised. These new methods were often considerably quicker and at the same time less fatiguing to the worker, since they were based as

far as possible on natural rhythm and easily formed associations of movements.

By studying the actual movements made by different operatives it was usually found that the best workers made a relatively small number of rhythmic movements, whereas less efficient workers made many irregular, angular movements. The latter method was naturally productive of considerable fatigue, for each sudden change of direction in a movement involves overcoming the momentum of the hand and arm and re-starting them into motion again. All this involves the expense of much muscular effort during the course of a long working spell. By simplifying the type of movements and reducing their number, and by substituting circular, rhythmic motions for angular ones, the investigators were able in many cases to devise a new sequence of movements which was much less fatiguing than the old cycle and at the same time very much quicker. In occupations where this has been done, learners are trained from the start in the best sequence of movements to adopt, and there is thus much less danger of their developing bad and fatiguing methods of work. In most cases foremen and experienced hands are themselves trained first in the new methods and they then have charge of the training of the newcomers, sometimes under the supervision of a works psychologist. Learning based on Motion Study is usually rapid, since the movements to be learned are of a natural type and easily acquired.

We now see our ex-schoolboy settled in a congenial, suitable occupation and trained scientifically

in his new work, but the industrial psychologist is by no means satisfied yet. There are many factors in industrial life which have still to be considered. First and foremost there are environmental conditions to be studied. A worker is not a happy and efficient man if the conditions in which he works are bad. This almost obvious consideration set investigators to work to study the problems of temperature, ventilation, lighting, and so forth, in their effects on the health and efficiency of the workers.

Much research has been done along these lines. Instruments such as the kata-thermometer and, more recently, the eupatheoscope were devised to study the effects of temperature and air currents. The humidity of the air has also to be taken into account in some industries, and the combined study of these atmospheric conditions has made it possible to devise methods of regulating temperature and ventilation which have a most beneficial effect on the health and comfort of the workers. It has also been found possible in many cases to determine the best type and intensity of lighting to adopt, and the most advantageous positions for fixing lamps. Measures for the relief of eye-strain in occupations requiring fine visual discrimination have also been taken.

Further, the problem of noise in relation to the worker has been studied. The effects of noise have been found to differ from person to person, being particularly adverse in the case of those with nervous symptoms. Noises made by a worker himself or by his own department are less irritating on the whole than those made by others. It was observed also that a small increase in output resulted from re-

PSYCHOLOGY IN THE INDUSTRIAL LIFE OF THE NATION
ducing noise by the use of ear defenders or other means.

Questions such as how to arrange tools and materials to the best advantage, what is the best posture for a given piece of work, what type of sitting accommodation is most fitting in cases where seats are desirable, and so forth, have all been studied in various occupations. On matters of this nature no universal rule can be given: individual cases require individual recommendations. As a rule engineers will have discovered and remedied gross maladjustments in machinery and arrangement of materials: the psychologist goes beyond this to the smaller details which facilitate or inhibit the formation of rhythmic and automatized sequences of movement. By examining these small details, usually with the aid of Motion Study, and altering them where necessary, working conditions have been ameliorated in various industries and the benefits shown in lessened fatigue, increased output, less spoilt work, and fewer accidents.

Closely allied to the study of these physical conditions of work is the study of such factors as hours of work, rest-pauses, routing or flow of material, and so on. To take the last point first; a well-trained, efficient operative is unable to do either himself or his employer justice if he is held up from time to time whilst he waits for his material. Many modern industrial operations are chain processes, each stage being fed by the preceding stage. It is, therefore, an obvious field of enquiry to seek the best methods of ensuring a steady flow of work from one department to the next.

The length of the working day is another important matter. Questions such as the following were frequently asked : Will a worker produce as much each hour if he works ten hours as he does working eight hours ? Are three eight-hour shifts more or less productive than two ten-hour shifts, making allowance for the extra time over all ? To many such questions the psychologist has been able to return a definite answer. The nature of the answer varies, of course, with the particular industry concerned, and depends to some extent on such points as whether the work is light or heavy in its physical demands. The question of shortened hours is a most important one. It appears from observation that workers unconsciously tend to conserve their energy when they have to work for many hours in a day. If the number of hours is reduced there is almost always an increase in the hourly output (the amount of increase depending on the nature of the work), and this increase may be so large that in some cases production in a shorter day may actually approach that in a longer day. The workers, moreover, are less fatigued at the end of the shorter day, in spite of having worked at a faster rate. As a corollary to this is the consideration of overtime work, which may have the effect of decreasing the hourly output throughout the day, so that in some instances the adoption of overtime work may be scarcely advantageous.

Another point which was examined in this connection was the effect of introducing rest-pauses in the working periods. In some industries workers were expected to continue at their labours for many

hours without a break. This induced considerable fatigue, and the question arose whether a short break in the long periods would repay in production the loss of time involved or not. Research showed that in many cases the answer was a decided affirmative. A break of as little as ten minutes in a five-hour spell frequently enables workers to produce more in the whole period than they did without the break: and here again this increased productivity goes hand in hand with decreased fatigue. In most cases the effects of introducing a rest-pause are not immediately felt. It takes time for the workers to adapt themselves to this slight change in routine, and in some cases as long as six or nine months will pass before the benefits of the innovation fully manifest themselves.

The optimum time in the working spell at which to introduce a break has also been studied. If it comes too early in the spell its effects tend to be lost before the end of the period; if too late, the workers may not have had time to regain their stride before the spell finishes. No point, however obvious or apparently common-sense, can be neglected by the psychologist, and in each case his suggestions are submitted to the strict criterion of actually observed results before he can regard his conclusions as valid.

The effects of rest-pauses have often been demonstrated clearly by the construction of output curves. These are graphs showing the output or rate of production at regular periods, say every quarter of an hour, throughout the working day. The shape of these curves is subject to variation, but most of them exhibit certain similarities. For instance, output at

the beginning of the working period is usually fairly low but increases rapidly during the first half or three-quarters of an hour. This is called the warming-up period or period of incitement. After this output tends to decrease, slowly at first and then more rapidly towards the end of the spell as fatigue sets in. Often a phenomenon known as end-spurt is observed: that is, in the last quarter or half-hour output again rises slightly, as though realization that the end of the spell is near lends the worker extra energy. In cases where rest-pauses are beneficial it is found that the pause arrests the steady decrease in output, and that after the break output restarts at a higher level than before. There is often a slight warming-up apparent after the pause.

There is another reason why rest-pauses at properly regulated times are beneficial. Human nature being what it is, workers will take their few minutes off from time to time for one excuse or another, whether they are supposed to do so or not, and these odd irregular breaks have a general effect of disorganizing the flow of work to a certain degree. An organized pause satisfies the need for rest without disturbing intra-departmental routine.

The amount of breakages and spoilt work is another criterion of the benefits of rest-pauses. It has frequently been found that the quantity of work spoilt is reduced by the introduction of a carefully placed rest-pause or by shortening an unduly long working spell.

We may now consider the next stage in our young worker's progress. Having selected him by psychological means for work for which he is fitted and

which is congenial to him, having trained him and settled him in a factory where the environmental conditions are excellent and the working conditions beyond reproach, we have given him a good start, but we cannot yet regard our work as finished. There is the more purely psychological question to be considered before we leave him : How will he get on with his fellow workers and his superiors ? A good deal of modern industry requires team-work, and it is most important that the individual members of a team shall work together equably. Internal strife is most detrimental to efficiency and comfort. Hence care has to be taken to prevent temperamentally unsuited workers from being yoked together, and here again the psychologist may help when cases of difficulty arise. Temperament presents a very difficult problem, and as yet only its fringe has been touched. It is desirable to have the members of a team well-matched also as regards their relative proficiency. It is found that one inefficient member of a team lessens the productivity of the whole, besides possibly setting up psychological strain in the more efficient members whose efforts are retarded.

The attitude of workers to their superiors has also been studied. Some men are born subordinates and work most happily under orders where they are relieved of responsibility and the necessity for exercising initiative. Others, on the contrary, are impatient of authority and discipline and work best when given a position of trust and responsibility without too much galling supervision. This is a temperamental factor which has to be taken into

account in vocational guidance, and which is also of great importance when the question of choosing foremen arises. A foreman who is a bully or who is merely a feeble man, incapable of maintaining discipline, is detrimental both to his employers and his subordinates. He fails to get the best out of the workers under him and, apart from lowered output, his subordinates may exhibit other symptoms of incorrect treatment—an undue amount of spoilt work, a high accident rate, or a great amount of time lost through absence. No definite rules can be laid down for the choice of a good foreman, and the point is still a matter for research. In any case it is clear that a highly skilled worker is not necessarily a good man to promote to the rank of foreman. A firm may quite well lose a good worker and the goodwill of a department simultaneously by promoting a man on the score of skill alone without taking into account the other necessary qualities of leadership, tact, and the ability to deal firmly but kindly with those under him. Nor should similar factors be lost sight of in the creation of managers, with whom psychological considerations may be of equal importance with business acumen.

So far a brief survey has been made of some of the activities of the industrial psychologist with reference to the individual worker, and now we may leave our imaginary young man to pursue his own career conscious of the fact that he is increasingly regarded as a man and not as a machine. There remain certain problems of a general nature, all of which are important and of application throughout the industrial world. Many of the problems

already mentioned have been worked out in individual firms and the results of some of the investigations are applicable only to certain industries, although at the same time they may make their contribution to the theoretical side of industrial psychology. Some of these more general questions may only be mentioned in passing: problems, for instance, such as the question of incentives and remuneration, the equity of time-rate or piece-rate systems of payment, monotony in industry, the value and best methods of advertising, and the problems of the marketing of commodities. All these matters fall within the purview of industrial psychology and have received, or are receiving, attention.

Studies of a general importance have also been made into industrial sicknesses and accidents. It has been found, for instance, that small illnesses are more common in some spheres of activity than in others, the single day's absence, ostensibly for sickness, occurring more commonly among workers such as shop assistants who have to deal with other people, than among workers who deal with machinery and material objects. Many of the observed facts about short absences point to the conclusion that they may be regarded as in the nature of an escape from a situation of strain rather than as physical illnesses. Hence an unduly high rate of short absences may be symptomatic of something wrong in some of the factors previously mentioned—bad environmental conditions, ill-planned working conditions, poorly-matched team fellows, domineering foremen, inequable systems of pay-

ment, and the like. The same is also true of industrial accidents, bad conditions being reflected in high accident records.

Extensive investigations have been made into industrial accidents, and it has been shown that a most important factor in the causation of accidents is accident proneness. This means that some people are definitely more prone to sustain accidents in the same circumstances than are others. Accident proneness appears to be a relatively stable quality, so that its detection among workers, particularly amongst young people, is a matter of great importance. Attempts to devise tests for accident proneness have already been made and a certain group of sensori-motor tests has been found, performance in which has a small but clear relationship with accident rate. This indicates that faulty sensori-motor ability is a factor in accident proneness, though it is obviously not the only one. Further research on this exceedingly difficult subject is still in progress.

In this brief account of Industrial Psychology, problems and methods of attack have been described rather than achievements. Fully documented presentations of the latter may be found elsewhere by interested persons; the object of this survey is to indicate the aims and scope of this new science. In many ways Industrial Psychology is still in its infancy. New facts are continually being learned and new theories formulated about them, and slowly each theory is being subjected to scientific tests. Any biological research is of a peculiarly difficult nature, since there are so many variable

factors at play. The psychologist in particular can rarely, if ever, be certain that he has kept all factors but one constant, and his efforts to secure adequate scientific control and a sufficient homogeneity of material make the work both arduous and lengthy.

CHAPTER VI

RACE AND MODERN SOCIETY

THE term "race" is used by anthropologists exclusively in a physical sense. By a race is meant a group of people resembling each other and differing from the members of other groups in respect of their physical characteristics. The characteristics usually taken into account include shape of skull; stature and build; colour of skin, hair and eyes; texture of hair, shape of nose. During the last few years, membership of one of the four blood-groups into which the human species appears to be divided has been put forward as an alternative, or even as a more important criterion.

It is unfortunate for would-be systematizers that these characteristics do not group themselves in such a way as to make classification easy. It would be very convenient if all people with black skins were short, if all people with yellow skins were round-headed, and if all people with white skins had fair hair; but this does not happen to be the case, and anthropologists have, in general, taken skin-colour and hair-texture as their main criteria, with skull-shape and stature as secondary features.

Skin-colour gives three main races, the white,



LORD RAGLAN

the black, and the yellow, which latter includes the "red" of the Red Indians. This yellow race is known as the "Mongoloid", and its leading characteristics, besides skin-colour, are high cheek-bones and straight black hair. Its members are predominantly, but by no means universally, round-skulled (brachycephalic), and in stature there is great variation. The habitat of the Mongoloid race is Asia (excluding India and the South-West) and America.

The black-skinned peoples are divided into two races, the Negroid and the Australoid. The Australoids are found in Australia and Melanesia, with remnants in South-eastern Asia. They are in general short, with low foreheads, long skulls, and wavy hair.

The Negroids, before 1500, lived in Africa south of the Sahara, and parts of Melanesia, with remnants in South-eastern Asia. The Semang of Malaya are Negroids, whereas the Sakai of the same region are Australoids. There is probably a large Negroid element in southern India. The Negroes all have woolly hair, and in general have long skulls and high foreheads; but in these and in other characteristics there is great variety. Their skin-colour varies from jet black to dark yellowish or reddish brown, and they include the Nilotes and the Pygmies, the tallest and shortest peoples on earth. There is also great variety of feature among them, since, while some West African tribes have very thick lips and very flat noses, certain East African tribes, such as the Bahima, though they have woolly hair and black skins, have, nevertheless, refined features. The

blackest, in fact, are not the most markedly Negroid in other respects.

The peoples who inhabit Europe, South-western Asia, and North Africa have been divided into three races, but to differentiate them skull-shape and hair-colour have been called in. The largest race, known as the Mediterranean or "brown" race, is found on the north and south shores of the Mediterranean, and extends on the east to Persia and northern India, where it is the principal element, and on the west round the Atlantic shores of Europe. In the British Isles it is very numerous, especially in the south and west. Its characteristics are a light-brown or sallow skin, black wavy hair, a long skull, low forehead and thin face, and a short, slight figure.

The Alpine race is prominent throughout the inland regions of Europe as well as in Asia Minor. It forms the principal element in the population of most European countries, including France, Germany, and Russia. In Germany, Alpines form about two-thirds of the population, and in France about half. In the British Isles they are less numerous, possibly a sixth. The characteristics of the Alpine race are : a round head, fair skin, dark but not typically black hair, rounded features, and a short, stocky figure.

The third European race is the Nordic, which is found almost exclusively round the shores of the Baltic and North Seas. It is predominant, though by no means universal, in Scandinavia, and is common in north Germany, the Netherlands, and northern France. Nordics are numerous throughout the British Isles, and are predominant in the coastal

region from Aberdeenshire to Yorkshire. The characteristics of the Nordic race are : a long head, fair skin and hair, blue eyes, prominent features, and tall stature.

The division of mankind into races as outlined above is, it must be made perfectly clear, purely arbitrary. Certain characteristics have been selected and used, not always quite consistently, as the basis of classification. It must be noted that some of the races have many features in common with others. The Mediterranean and the Australoid, for example, differ markedly in skin-colour and shape of nose, yet in shape of skull, colour and texture of hair, and in figure and stature, they are very much alike. Similarly, there are points of resemblance between the Alpines and Mongoloids. It must also be recognized that many people, especially many Europeans, cannot be classified as typical members of any race, but must be regarded as hybrids. In spite of these drawbacks, however, the scheme holds the field, since it can be applied universally ; its features are for the most part easily recognizable, and it emphasizes the fact that in man, as in animals, distinctions of race can only be based on features which can be accurately measured and described. The only other method which would fulfil these requirements is that of the blood-groups ; but these, while they answer pretty well when applied to outlying groups such as the Red Indians, break down in Europe, where all four groups are everywhere present, and seem to be incapable of correlation with any other factor.

The theories which have been put forward to

account for the physical differences between the various peoples of the earth are numerous, and none of them has received anything like unanimous support. They may be divided into two groups : those which postulate a multiple origin, and those which postulate a common origin with subsequent divergence.

The difficulties in the way of accepting a theory of multiple origin are very great. It has been suggested, for example, that the white, black, and yellow races might be descended respectively from chimpanzees, gorillas, and orang-outangs. The objections are, first, that the morphological differences between the races of man are much slighter than those between the three species of ape ; secondly, that the races of man all interbreed freely, which would be unlikely if their resemblances were due to convergence, and not to common origin ; thirdly, that such indications as there are suggest the region of the Himalayas rather than Malaya or Africa as the original home of mankind ; lastly, that races of men arising from different species of animals in different parts of the world would be unlikely to exhibit the close cultural resemblances which are everywhere found. Not only do or did all races make stone implements, but these implements show the most striking resemblances, not only in form and the technique of construction, but in the exact order in which changes took place. Not only do all races draw pictures, but to a great extent they make, or have made, the same kind of pictures in the same kind of places. Not only do all men use language, but highly artificial forms of

language, such as tenses, cases, and grammatical gender, are found far transcending the bounds of race, however race may be defined. These and many other facts suggest, though of course they do not prove, that all men are of one stock, and that the beginnings of culture were in existence before differentiation began.

Comparative anatomists are apt not merely to exaggerate the morphological differences between the races, but to ignore the cultural resemblances ; the latter are far too close and too numerous to be explained by airy generalizations about the essential similarity of the human mind, especially if the human mind is supposed to be of diverse origin.

While, however, the best opinion seems to be that the whole of mankind is derived from one stock, no satisfactory explanation is forthcoming of the process by which differentiation into race took place. Many theories have been put forward which seem satisfactory at the first glance, but which break down when it is sought to apply them in detail. It has been suggested, for example, that residence near the equator makes people black, while residence near the poles makes them white. We find, however, that there is little difference of complexion among the pre-Columbian inhabitants of America, whether they live in Greenland or in the Valley of the Amazon. We also find that the Negroes who live in the hottest parts of Africa are not always the blackest. We find, further, that the aborigines of Southern Australia, who live in a temperate climate, are black, or nearly so, as were the Tas-

manians, who lived in a still colder climate, and must have been there for many millennia.

Attempts have been made to prove that long skulls are associated with low altitudes, and round skulls with high altitudes, but there are many exceptions. There are also enough exceptions to invalidate the theory that racial differences are due to the presence or absence of calcium and iodine in the soil.

A different type of agency, sexual selection, was put forward by Darwin as a possible factor in the development of racial differences. His suggestions have been accepted as dogmas by some later writers, who, it seems to me, have not really envisaged the processes which they postulate.

Sexual selection might in theory work in one of two ways. In the first, there might be an isolated group in which, for some reason, those males who were somewhat lighter in skin-colour took to mating only with the lighter females, and the darker males only with the darker females. In the course of time, if this procedure were rigorously followed, we may suppose that differences from the norm of colour might become more and more marked, but at what stage, and how, would a new race arise? Are we to suppose that when differentiation had reached a certain point the group would divide itself into two halves, each of which would go its own way? We have not the slightest reason to suppose that anything of the sort has ever happened.

The second way in which sexual selection might conceivably work to produce a new race is by a portion of a group remaining unmated. If the

darkest tenth among the males never became fathers, or the darkest tenth among females never became mothers, then the group as a whole might become gradually lighter, but it is a practically universal rule among savages that nobody remains unmated. Every fertile woman is a mother, and every man may become a father. The ablest men may have the most wives, but this fact, while it might lead to an improvement in the physique and intelligence of the group, could hardly affect its morphology. The whole theory of sexual selection, as applied to groups, is not merely improbable in itself, but is opposed to a fact of which we have ample evidence, namely that when two racial types meet they tend inevitably to combine.

Of other theories which attempt to account for racial differences, the latest are those which would attribute them to differences in the secretions of the glands. Zuckerman has shown, however, that these theories have no basis in ascertained fact. Perhaps the best theory that can now be put forward is that racial differences are the result of "sports", fixed and perpetuated by some form of natural selection.

In the foregoing I have used the word "race" in the sense in which it is always used by anthropologists. It is, of course, open to anyone to use the word in any sense that he likes, and it is often applied to religious, political, geographical, or linguistic groups. These uses, however, are not merely illogical and inconsistent in themselves, but necessarily beg every question which involves consideration of the real nature of race.

Let us start with a religious group to which the term "race" is often applied—the Jews. It is uncertain to what race the original Jews belonged—they were probably a mixture of Mediterranean and Alpines—but it is quite certain that the original type has been considerably modified by the vast number of converts which were made towards the beginning of the Christian era, when the Jewish religion was a great proselytizing religion. To believe that the multitudes of Jews which in the days of the Roman Empire were found in Italy, in Egypt, in Cyprus, and elsewhere, were all of pure Palestinian descent is to believe what would be impossible and which is known to be historically untrue. The Jewish missionaries in Spain must have had considerable success, for, even after centuries of Moslem and Christian ascendancy, very large numbers still adhered to their religion. In Eastern Europe the missionaries met with even greater success, and as late as the eighth century converted the ruling classes of the Khazars, a powerful Tartar tribe whose king then ruled over most of southern Russia. It is possible that the descendants of these and other converts may account for the majority of the East European Jews.

The missionary activities of the Jews have been for long circumscribed, yet even in modern England it is by no means unknown for Christians to marry Jews and adopt their religion. In spite of these facts, which are reflected in the physical make-up of the Jews, most people suppose all the Jews to be pure-blooded descendants of Abraham. This is due partly to certain religious dogmas, which cannot be

discussed here, and partly to the fact that European Jews have a typical facial expression, which will be discussed later.

There must, on the other hand, be vast numbers of people, now non-Jews, whose ancestors were of the Jewish faith. Many Spaniards, for example, must be descended from the thousands who were unwillingly converted.

Let us now turn to a linguistic group to which the term "race" is popularly applied, and consider the "Latins". Two thousand years ago the Latin language was hardly spoken outside central Italy. In southern Italy the principal language was Greek, and in the north it was Celtic, which was also spoken over the greater part of Gaul, Spain, and Britain. Over the rest of this area the language was probably that which we now call Basque, a non-Aryan language, now confined to north-eastern Spain and the adjacent corner of France, but shown by place-names to have once had a very much wider distribution. The Celts, a warlike people from the Danube Valley, gradually spread over this area and imposed their language on its inhabitants. The Romans conquered the Celts, and later the Teutonic-speaking tribes—the Goths, Franks, and Saxons—conquered the Romans. It is only in the Basque area that what we may suppose to have been the original language of the people is still spoken; over the rest of Western Europe the people settled down to the language of one or other of their conquerors. Whether a Celtic, Latin, or Teutonic language is spoken in any given part of Western Europe has little or nothing to do with race, but is the result of

political or geographical accident, tempered by the fact that an illiterate people changes its language very easily, whereas where there is a literature the resistance to change is very much greater. If race affected language, we should not find millions of American Negroes speaking nothing but English.

The racial differences between Europeans and Negroes are obvious, but less obvious than is commonly supposed. It is reliably calculated that at least 80 per cent of the Negroes of America have white blood in their veins, and many of them are not darker than some South Europeans. On the other hand many American "Whites" have Negro blood. The difference between a "White" and a "Negro" may be based not on complexion, but on the social status of the parents.

But whereas there is, at any rate nominally, a marked physical distinction between "Whites" and "Negroes", it is language, and nothing else, that distinguishes the French Swiss from the German Swiss, or the Flemings from the Walloons. If to speak a Teutonic language makes a person a Teuton, then all East European Jews are Teutons, since they speak Yiddish, which is at least three-quarters German.

The differences between these peoples are differences not of race but of culture, and culture expresses itself largely through facial expression. Every religious belief induces certain habits of mind, such as hope, fear, resignation, submission, or independence, all of which influence the character, and so the appearance, of its adherents. Every language has its characteristic sounds, or modes of expression,

which mould the features, and especially the lips, of those who habitually speak it: The differences produced thus are analogous to the differences which we notice between priests and soldiers, or lawyers and farmers. But whereas these occupations are followed in most parts of the world, languages and religious beliefs are largely local. The result is that, whereas all the Basques are regarded as belonging to a Basque "race", nobody supposes that all sergeant-majors belong to a race of sergeant-majors. As a fact, the Basques vary in type from the pure Alpine to the pure Mediterranean, and from a crowd of mixed Europeans it would probably be much easier to pick out the sergeant-majors than the Basques.

Then, again, there are social conventions, according to which it may or may not be correct to display such emotions as anger, enthusiasm, affection, or disgust. In this country, for example, people who in ordinary life seldom raise their voice may become hoarse with yelling at a football match or a political meeting. Such phenomena, when imperfectly observed, lead to the labelling of certain "races" as excitable, mercurial, stolid, or impassive, and the savage, who has not learnt to go into hysterics over a game of ball, but makes a noise when his mother dies or his wife runs away from him, is considered "childlike".

There is no doubt that people, of whatever race, who lead a communal life are quicker-witted and more excitable than those who live by themselves, but it by no means follows that they are more intelligent or more sensitive. The so-called extravert

and introvert types have a wide distribution, but how far their condition is innate and how far due to social causes is very uncertain.

But even when we have eliminated all differences in conduct and character which may be due entirely to social causes, and concentrate our attention on inherited physical characteristics, which as we have seen are the only characteristics which can be described as racial, there are still many pitfalls before us. A man's physical characteristics may be due entirely to his racial inheritance, yet their effect upon his character may be due to his social environment. A man of medium height, living among tall men, may exhibit all the characteristics of the little man, such as quickness, impatience, and readiness to take offence. The same man, living among short men, may display the opposite characteristics. If our man of medium height has black hair, the observer may be tempted in the former case to say that black-haired men are touchy, in the latter that they are not.

On the Upper Nile a black skin is considered a sign of full-bloodedness and vigour, and is a social asset ; in America a black skin is a mark of social inferiority. In either case the man tends to become what his fellows believe him to be.

It is often confidently asserted that Negroes are innately inferior to Whites in mental capacity ; this may be so, but it has not been proved. It is to be noted, in the first place, that intelligence tests do not prove Negro children to be less intelligent than White children. There is nothing surprising in this, since any child born with a sound physical

constitution is born intelligent, though it is soon rendered unintelligent by disease, dull surroundings, and dogmatic teaching. The Negro, then, apparently starts out as well-equipped as the White; and those who have lived among Negroes, in areas where they do not suffer from the results of the slave trade, know that in the common affairs and common occupations of life they show themselves just as capable as Whites. But they have never produced a literary or scientific genius. This is true ; but it should be realized that peculiar conditions are required to produce genius, and that there are large areas of Europe which have never produced a genius. Genius, and even talent, can only be developed where there are cultural traditions and social opportunities.

It may be asked how it is that the Negroes have not provided these for themselves, but they might retort the same question upon Europeans. It is now known that the foundations of civilization were laid not in Europe but in South-east Asia and Egypt. In these regions we find a knowledge of mathematics, astronomy, and medicine ; of metal-working, weaving, and building in stone, to name but a few items, at a time when Europe was still sunk in savagery. The invention on which the whole of modern civilization rests, writing, was made in Phoenicia from elements derived from Egypt and Mesopotamia. The civilization of the Greeks was due, not to their racial inheritance, but to their culture contacts with the East and South. There may have been something in their racial make-up, probably a very mixed one, which enabled them

to improve on what they received, but that is as far as we can go.

To sum up : there is no doubt that some individuals are born with greater abilities than others. This is shown by results drawn from orphan asylums and foundling homes, where children are brought up in the same way almost from birth. It is to be expected, since ability is associated with sound brains and keen sense-organs, and many children are born with neither. But it is highly doubtful whether these abilities are in any degree specialized. A person may be born with superior ability, or at any rate the capacity for superior ability, but it is outside influences which determine whether that ability shall manifest itself in any particular occupation ; and if this is true of the individual, as there seems to be no doubt that it is, then it must also be true of the group ; that is to say, there may not be any human group, racial or other, with an innate aptitude, or lack of aptitude, for any particular branch of human activity.

Are there racial groups whose innate general ability is above the average ? Prejudice in favour of our own race, or what we suppose to be our own race, inclines us to believe that there are, but the evidence is unconvincing.

What will be the future of the races ? No doubt some of the smallest and most remote groups will die out, or be exterminated, as has happened to similar groups in the past ; but what of the rest ?

There are two forces at work. One of these works through systems of caste and creed ; through political groups such as the Nazis and the Ku Klux

Klan ; and through the general tendency to marry within the group, whatever the group may be. Theoretically these should be sufficient to keep people of different races apart, but they have never prevailed against the other force, the attraction which the sexes have for each other, irrespective of class or colour.

In India the Brahmans are in theory a caste apart, yet the Brahmans of one area resemble rather the type of that area than the Brahmans of another area. In the United States, in spite of laws against intermarriage, social pressure, and the large number of recent immigrants, it seems that at least a tenth of the population is of mixed White and Negro origin. The Jews were readmitted to England by Cromwell, but those who came in before 1750 have been completely absorbed ; and there is nothing in the least French, except their names, in the descendants of the Huguenots. We are also being hybridized in other ways. During recent years many Indians, Chinese, and Negroes have settled in this country, especially in the ports, and have apparently no difficulty in finding English wives.

Such facts could be multiplied indefinitely. What they suggest is that, just as the races of mankind must have arisen as a result of geographical segregation, so they require geographical segregation to prevent them from fusing, and geographical segregation is becoming more and more a thing of the past. It seems, it is true, that certain physical types are better suited than others to certain climates and certain social conditions, but, in spite of this, and in spite of the efforts of the "pure race" fanatics, there

HUMAN AFFAIRS

can be little doubt that the process of racial fusion, which is going on to a greater or lesser extent all over the world, will end in the world's being peopled, if not by a single race, at any rate by so mixed a population that racial distinctions will cease to matter.



DR. C. P. BLACKER

CHAPTER VII

EUGENICS AND SOCIAL PROGRESS

THE term Eugenics is not altogether easy to define. Sir Francis Galton defined it, or rather was a consenting member of a committee which defined it, in the following words: Eugenics is the study of agencies under social control that may improve or impair the racial qualities of future generations, either physically or mentally. The description is not wholly satisfactory. By its emphasis on *study* it suggests that eugenists are solely concerned with researches and investigations; and the phrase "agencies under social control", by including all attempts to produce social betterment by improved housing, feeding, and public health, may lead us to overlook the essential fact that it is the word *racial* which is the key-word of the definition. The word "racial" is vague, and it is not at once apparent that it is intended to mean the same thing as "genetic", "inborn", or "hereditary".

The word "eugenics" should convey the double idea of a study or science and of a purpose. Our knowledge of how far good and bad (or socially valuable and harmful) qualities are inherited is still very incomplete. Eugenists are among the first to

recognize this and to want to know more. To this extent, eugenics implies a study or science. But the eugenicist wants to go further than this. He wishes to apply our knowledge, as it is gained, to the improvement of the race. To this extent, the word "eugenics" implies a purpose, aim, or goal.

The idea of eugenics derives from the evolution theory, and from the processes of variability, heredity, and selection which operate among human no less than other animal species. Human variability can be considered in the light of many standards, among others that of useful citizenship. The aim of eugenics is often represented as being to promote the fertility of persons above the average in respect of the sum-total of qualities which make for useful citizenship and to discourage or reduce that of persons below this average. This aim proceeds from the belief that the qualities in question are hereditary. Eugenics thus comes to have "positive" and "negative" aspects.

But how are we to decide what are the characteristics which make for useful citizenship? And, in view of the extreme complexity of the cultural environment of man, how are we to determine the extent that they are hereditary? Eugenics, much as we may regret it, is not entirely a dispassionate and objective science. The subject, in fact, excites violent partisanship. Its controversial nature springs directly from the interpretations which have been placed upon the social values in terms of which we estimate useful citizenship, and upon the scientific methodology by which certain writers upon the subject have been guided in asserting that socially

valuable and harmful qualities are, in fact, hereditary.

It is easy, say critics of eugenics, to assert glibly that we must encourage the reproduction of persons of super-average social endowment and discourage that of persons with sub-average. In theory it is easy enough to visualize this average, much as we might picture to ourselves the equator dividing the surface of the earth into two equal parts. There is, indeed, no difficulty in establishing such an average when we are dealing, as does the experimental biologist, with a single readily measurable character such as tallness in plants or body-weight in animals. But, says the critic, look at the inextricable tangle of physical, intellectual, and moral characteristics which, in an infinite series of combinations, contribute to the condition we call "useful citizenship"! Even if we knew exactly how far they were the product of genetic as against cultural factors (which we are, of course, lamentably far from knowing), how would we measure them against one another?

This attitude of mind is one with which, as a practising physician, I have much sympathy. Two serious-minded and conscientious young people of opposite sex (frequently they are first cousins) come to one and say that they are thinking of getting married. But they are in doubts as to whether this step is morally justifiable in view of the fact that a hereditary abnormality exists in one of their families. They may ask for a mere estimate of probabilities, or they may go further and actually enquire if they ought to get married. Sometimes the man may ask if he can be sterilized. In whatever way the genetic

situation may be appraised, the problem remains of balancing it against the socially valuable moral qualities which lead the couple to take so seriously their responsibilities and to ask for guidance. Such qualities are readily contrasted with the irresponsible fecklessness with which, in every doctor's experience, patients of quite another category bring child after child into the world regardless of every consideration which may affect themselves or their children. The difficulty of weighing against each other a number of incomparable mental, moral, and physical factors is such that in many, perhaps most, cases it is impossible for the doctor to say of the person sitting in front of him whether, in fact, he is above or below the hypothetical eugenic average.

But to return to the critic of eugenics. "Where the experimental biologist is sceptical", says he, "the eugenicist is all too ready with thinly camouflaged social prejudices. In the absence of any properly grounded standards of scientific measurement, he adopts as the criterion of biological worth a person's status in the social hierarchy. The socially successful upper and middle classes should be encouraged to have children: the socially unsuccessful working classes should be discouraged. The rich should breed, the poor should be sterilized or compelled to use contraceptives." Again, I must confess to having a certain sympathy with the critic. There is no concealing the fact that there exists a type of class-conscious person who hates and fears the poor much as certain white people in America hate negroes. Take such a person to a cup-tie or to a dog-race meeting. He would survey the surging

masses of the proletariat with aversion. He sees them as a swelling horde of brutish and uncultured submen which, by its relatively high fertility (often described by the terms "spawning" and "proliferating"), is gradually submerging the dwindling group of select persons from whom all that is socially valuable emanates. These innately favoured persons, he believes, are now being expropriated (much as were travellers in Elizabethan England by highwaymen) to provide doles, allowances, pensions, and benefits for the incompetent dregs of society who have not the capacity to support themselves. The cause of eugenics is readily espoused by persons holding such convictions, who visualize it as a means of somehow stopping the spawning and proliferating process. It is not difficult to see why eugenics provokes partisanship.

But it is now the reader's turn to criticize. "All that you have done hitherto", he will say, "is to declare your sympathy with opponents of eugenics. What of your defence of the subject?"

The fruitful application of the principles of eugenics would unquestionably be easier than it is if we had some simple yardstick by which to measure the qualities which make human beings socially valuable; if there existed an accurate and universally acceptable scale upon which everyone could be classified in accordance with his eugenic excellence. But no such scale exists, and I am doubtful if, in an entirely satisfactory form, it will ever exist. What, then, is the answer to the question, vital for eugenics: Who are the people whose fertility we could variously wish to restrict and promote?

There are, I submit, three classes of persons whose fertility we should like to restrict. The first and smallest category consists of persons suffering from specific diseases and defects of a definitely hereditary character. The subject of hereditary diseases is a very large one, and its importance is primarily medical. With the aim of guiding the general practitioner as to how to proceed in giving a "eugenic prognosis", I have edited a symposium by specialists in those groups of diseases which are recognized as hereditary.

The second category of persons whose fertility we might reasonably like to restrict consists of the so-called "Social Problem Group". This term was first used by the Mental Deficiency (Wood) Committee, 1929, to designate a social aggregate of persons who exhibit multiple social problems of which one of the most conspicuous is the frequent procreation of high-grade mental defectives. Here are three instances of "Social Problem" families which have been reported :

A man of alcoholic and immoral tendencies married four times. His first wife was normal and two normal children were born. The second wife was feeble-minded, as was one of her two children. The third wife, a feeble-minded prostitute with five mentally defective brothers and sisters, had no less than six feeble-minded children of whom three were illegitimate. The man's fourth wife was an alcoholic prostitute by whom he had no children.

A man, reputed of bad character, married twice. His first wife was normal and by her he had two children who were sent to Industrial Schools. The second wife was mentally defective and had been imprisoned three times for cruelty and neglect of her eight children. Of these,

one was a prostitute ; one was in an Industrial School ; two were feeble-minded and living at home ; another feeble-minded, was in a certified institution ; another was backward ; and the last was too young to classify.

A feeble-minded and epileptic woman, by an apparently normal man, had nine children. The first was feeble-minded ; the second died in infancy ; the third was feeble-minded and epileptic ; the fourth died in infancy ; the fifth was an imbecile ; the sixth, thought to be an idiot, died young ; the seventh and eighth were feeble-minded and epileptic ; the ninth, though backward, was too young to classify.

In the Report of the Departmental Committee on Sterilization (p. 87) a family was quoted in which there were 17 children of whom 12 were living, 8 being mentally defective.

These families, though extreme examples, will give a rough idea of what is meant by the Social Problem Group. Members of these families exhibit multiple social problems such as mental defectiveness, insanity, epilepsy, inebriety, prostitution, recidivism, and destitution. But it is no less difficult to define and delimit the Social Problem Group according to rigid standards than it is to demarcate accurately any social category possessing special biological characteristics. In an attempt to organize further investigation of this group, "borderline" families came to my notice of which it was difficult to say whether they should or should not be included in the group. When, however, a good instance of a "Social Problem" family is seen, there is no difficulty in recognizing it. Common features are destitution and a high fertility ; it is the first of these which usually brings them into

contact with social service agencies. Destitution, however, is by no means invariably found. Social problem families are found in all classes of society.

A third group of persons who come into the province of negative eugenics has been recently described, from various standpoints, by Cattell,¹ Newth,² and Caradog Jones.³ The first and second of these writers have drawn attention to the fact that the sibships of groups of children of subnormal intelligence whom they have examined are above the average in size; and the comprehensive Merseyside survey conducted by Mr. Caradog Jones has shown that precariously employed men with little occupational skill also have families that are of above-average size. These enquiries confirm the view that persons whose intelligence is subnormal but yet sufficiently high for them to be uncertifiable as defective in the legal sense, procreate and belong to large families. Such persons may not fall into the Social Problem Group, because they and their families, if engaged in simple work such as agriculture, may not exhibit social problems. They might more appropriately be said to belong to a "sub-normal group", a term used by the Wood Committee.

One of the writers above referred to, Dr. Cattell, has made use of intelligence tests. It is easy to throw ridicule upon the results of intelligence tests ;

¹ R. B. Cattell, "Is National Intelligence Declining?" *Eugenics Review*, October 1936, xxviii. 3.

² A. A. E. Newth, "A Social Problem Group?" (Oxford University Press, 1936), pp. 15-36.

³ D. Caradog Jones, "Eugenic Aspects of the Merseyside Inquiry", *Eugenics Review*, July 1936, xxviii. 2.

it has even been stated that we do not yet know what intelligence is. While nobody would be rash enough to contend that intelligence, as measured by tests, is to be exactly equated with the sum of qualities in terms of which we should estimate social usefulness, it is generally recognized that intelligence thus measured is *correlated* with the capacity for social usefulness. Speaking as a psychiatrist rather than as a eugenicist, I should view more favourably the prospects of my children if they had intelligence quotients of 130 rather than of 70. So would most critics of the tests if they had themselves ever applied them to large numbers of people.

There are good reasons for believing that intelligence, however estimated, is to a large extent hereditary. The high fertility of persons with a low intelligence, and the low fertility of those with high intelligence, thus becomes important in the degree that we regard intelligence (whether measured by tests or by scholastic attainments or by any other standards) as somehow correlated with the qualities which, in aggregate, make for social usefulness. It can further be generally stated without snobbery that among persons occupying very unfavourable economic and social positions, such, for instance, as the chronically unemployed in districts where there is little unemployment, are to be found a large proportion of persons of low intelligence as measured by intelligence tests as well as by more rough-and-ready standards. The high fertility of such persons is to be deplored whatever view we hold of the causation of their low intelligence; for, genetic considerations apart, the environment in which

the children are reared is the least conducive to their favourable development.

If, then, the persons whose fertility we would like to restrict are comprised by these three groups of people—those who are afflicted with specific hereditary abnormalities, the Social Problem Group, and persons of markedly subnormal intelligence—it will be recognized that they do not constitute a very large fraction of the community. The Mental Deficiency Committee above-mentioned estimated that the Social Problem Group amounted roughly to 10 per cent of the population. But this is an arbitrary fraction. The number of families in a given community suffering at a given time from destitution will depend on the prosperity of that community. In the communities of the distressed areas, for instance, we should find that a very large proportion of people suffered from destitution; many would also exhibit “social problems” and would impinge on various social service agencies. But it would not follow that this unfortunate predicament was in any way genetically determined or that it was the expression of an innate biological sub-normality. Here as elsewhere, it is by no means easy to distinguish the effects of bad environment from those of bad heredity. Each family has to be considered on its merits. If this is carefully done, there is, in most instances, little doubt as to whether the family’s fertility is a biological asset or liability to the community.

The second important problem of negative eugenics is *how* the fertility of sub-normal families is to be limited. Existing contraceptive methods

are largely impracticable by members of the Social Problem Group, whose fecklessness makes them impervious to the many prudential considerations which are effective in limiting the fertility of most normal persons. In this connection it is obviously desirable that contraceptive technique should be simplified and improved. Researches with this end in view are now in progress and may well produce good results, because the large families of the persons we have been considering are practically never planned and very rarely desired. Facilities, moreover, for using existing methods of contraception, and better ones if and when these are discovered, should be made universally and cheaply available. Organizations exist—the National Birth Control Association and the Constructive Birth Control Association of Dr. Marie Stopes—which are successfully working towards this end.

Voluntary sterilization on eugenic grounds should also be legalized under appropriate safeguards. Recommendations to this effect have been made by the Departmental Committee on Sterilization, whose Report was published in 1934.

Facilities for terminating pregnancy might also be provided in the presence of good eugenic indications. Though the legalizing of abortion strikes many people as more shocking than the legalizing of sterilization, its effects, when judged from the biological standpoint, are less drastic in that an abortion does not usually affect a woman's subsequent fertility, whereas the approved sterilizing operations, being largely irreversible, do.

Legal prohibition of marriage has frequently

been proposed for mental defectives. On close examination, however, this measure is found to have little to recommend it. The ends it seeks to achieve can be better realized by sterilization. Euthanasia conducted with the humanitarian object of minimizing the suffering caused by incurable disease is here irrelevant. Euthanasia applied to genetically abnormal newly-born children has very little scope, because the number of such abnormalities which can be confidently diagnosed at birth is small. From the genetic standpoint, identical results would be achieved by sterilization in later life. But it would be desirable to popularize voluntary health examinations before marriage. These are useful both from the eugenic and social standpoints. A schedule for the use of doctors has been prepared by the Eugenics Society.

Let us now turn to positive eugenics. In general, it can be said that while the principles of positive eugenics are more acceptable than those of negative—they offend no prejudices and run counter to no religious prohibitions—they are very difficult to implement. The problem of positive eugenics is coming to be increasingly influenced by quantitative considerations arising from the fact that unless fertility is significantly raised in the near future, a numerical decline of the population is inevitable. How are people to be induced to have more children? How can we restore as the average the family of three or four? The answer to this question depends upon our evaluation of the reasons why people limit their families.

In the last sixty years the birth-rate of this

country has halved itself. Nearly all authorities agree that this change results from the increasing use of birth control. The use of birth control, however, is not, strictly speaking, a cause but a means. The essential problem is to ascertain *why* people use birth control. The reasons are numerous and complicated, and spring from every aspect of family and social life.

So numerous are they, and so closely entangled, that it is difficult to separate them from one another and to appraise their separate effects. How important, in the first place, are physiological and medical causes of infertility? How many people, in other words, want but cannot have children through inability to conceive? How many people would like to have children but are deterred by considerations of health? What has been the effect of the scare about maternal mortality? Would the establishment of a really efficient maternity service, such as markedly to reduce the maternal mortality rate, alter people's attitude? How important is the complex of socio-economic deterrents—the lowering of the standard of living brought about by numerous children, the fear that on reaching maturity the child may find itself unemployed, the desire to give the best chances to one or two children already born? How important are philoprogenetive motives as against selfish? “The dwindling family”, it has recently been remarked, “is the result of what is worst and what is best in the potential parents. Caution and self-indulgence, responsibility and the careless love of pleasure, both cry out against the large family and

even the small one." The problem affects working and middle class families differently, yet their reactions are similar. A family of six children may reduce a working man earning fifty shillings a week to such poverty that he would find it difficult to provide the bare necessities of life for his children. A family of similar dimensions, while in no way reducing him to subsistence level, would seriously change the mode of life of a man earning £900 a year. On a medium-sized income, a large family is incompatible with such luxuries or amenities as a motor, domestic help, travel, amusements, and the entertainment of friends. Ambitions to improve one's social position, and ambitions to raise one's children to a higher social level, are difficult to realize if their number is large. Lastly, how important are such intangible factors as the social and international atmosphere? With the prospect of periodic economic depressions causing widespread unemployment, and with the threat hanging over us of another European war, are people going to have more children, however much the social handicaps of large families are mitigated? With the object of estimating the relative importance of these many factors in deterring people from parenthood, a Population Investigation Committee has been formed, and various enquiries are being planned.

When we survey the picture of social life in England to-day, we are impressed with the number and the excellence of the reasons why married couples should have few children. Now that people are equipped with the means of preventing births,

the reproductive impulse is coming to be a delicate thing, struggling for expression against numerous checks and obstacles. It may well prove to be incapable of effective resuscitation until drastic changes for the better are introduced into our social and international life.

In the above outline have been enumerated various deterrents from parenthood which, in varying but uncertain degrees, are known to be operative to-day. Several remedies have been advocated by eugenicists, all of which are directed towards the minimizing of the economic burdens of parenthood. They include the provision of family allowances graded in accordance with the recipient's income. These allowances could be administered by the Pool system, familiar on the Continent, which involves no social injustice. The provision of numerous and substantial scholarships might do much to reduce the expenses of education for the parents of able children whose fertility we should all desire to promote. The system of income-tax rebates for children might be more generously and comprehensively developed. If parenthood is to be regarded as a social duty, the various handicaps which now attach to it must be removed or, even better, converted into benefits.

Discussion of the problem of eugenics has frequently turned upon the existence of a statistical average of eugenic endowment. Persons above this average, we are told, should have large families, and persons below it small. Various social measures, ranging from divorce and family allowances to the provision of old-age pensions, are discussed in terms

of whether they will produce the desired results among persons on each side of this average. Such discussions are apt to strike the reader as speculative, and if he has a sense of political realism he may well feel that they will prove destitute of effect in shaping social policies as compared with other powerful incentives. In the above exposition no attempt has been made to define, or to think in terms of, a eugenic average.

The province of negative eugenics, it has been suggested, is restricted to three fairly easily recognizable categories of persons. Its tasks are to increase our knowledge of these categories; to make available among the persons comprising them scientific guidance on genetic problems as well as facilities for restricting fertility; and to spread among them and the rest of the community a sense of the social responsibilities of reproduction.

The province of positive eugenics comprises the bulk of the population. Its tasks are to minimize, as far as possible, the disabilities and handicaps attaching to the large as against the small family, and at the same time to spread among normal people a social conscience favouring fertility.



SIR HENRY BRACKENBURY

CHAPTER VIII

MEDICAL PROGRESS AND SOCIETY

THE importance of health, both individual and communal, in modern society should be sufficiently indicated by the fact that the usual greeting, when two members of that society meet, is "How are you?" or "How do you do?" This greeting, moreover, although of prolonged and almost universal use, has not yet degenerated into a mere formula of only historic significance but, speaking generally, is still a real question to which an answer is looked for and, for the most part, given. In spite of the indication thus shown that liability to a departure from normal health is both important and prevalent, there is no doubt that the answer to the question is nowadays more commonly favourable than it was fifty years ago, and that there has been a definite lessening of the incidence of personal illness, and a wide improvement in the health conditions of the community during that period. This is the more significant in that the value which society places upon health, the conception of what health really means, and the aims of those whose business it is to promote health, have all been greatly widened or increased since the beginning of the present century.

An effort is not infrequently made to express illness in a community in terms of economic loss, and to calculate the monetary cost of combating it. Sometimes a balance-sheet on these lines is produced, but what is shown, or intended to be shown, by such a balance-sheet is not quite clear ; indeed, it may be contended that the figures on both sides should be added together in order properly to show the cost of ill-health to a nation. Such a purely financial or numerical assessment is not without its uses or significance, but, though it may appeal vividly to certain minds, it is not really of supreme value. It may be impressive to be told in the Report of the Chief Medical Officer of the Ministry of Health that, in 1933, "in England and Wales there was lost to the nation in the year, among the insured population only, and excluding loss due to sickness for which sickness or disablement benefit is not payable, a total of about 29 million weeks' work, or an equivalent of 12 months' work of 558,000 persons" ; or to have it estimated that "in the United States the total expenditures for medical care in a normal year are about \$3,656,000,000 or \$30 per person" ; but such figures, and those of calculations made from them, are often of an almost astronomical order and therefore difficult of mental realization, or at best serve as a very partial indication of the proportionate importance of ill-health in a social community, or of the propriety of large employers of labour, even in their own economic interests, making a far greater contribution towards the prevention and speedy relief of sickness or disablement. It is of more practical use to know

that some 15 per cent of the loss of work by insured persons, stated above, is due to rheumatic conditions, and more than 30 per cent due to psychoneurotic conditions ("nerves" as they are popularly called), for this does give a definite indication of the direction in which the medical profession and society should look for the application of the most urgent remedial measures.

No doubt the economic aspect of ill-health, thus crudely expressed and however imperfectly realizable, has had considerable influence in enhancing the value which the nation places upon its health. Even from this aspect it is realized that it is not only actual absence from work that counts, but also the loss of efficiency, very great in the aggregate, which accompanies minor departures from health which do not actually incapacitate. There have to be added to the account also all the time, energy, and effort which are given by those who are attending, in one way or another, to the needs of the sick persons. But, over and above such economic effects, society has become concerned for the general well-being and fitness of the nation for purposes other than work or earning power—for example, for physical capacity in defence, for the wise and full use of leisure, for individual happiness and *joie de vivre*. For all these reasons, and others, the value of health is more definitely realized to-day than ever before.

There is an enhanced conception, too, of what health really is. It is no longer a mere negative conception, but one of a very positive nature. It is not the absence of illness only, but an actual and

definite sense of well-being. It relates not only to the integrity of bodily structure and the proper performance of bodily functions, but to the condition of the whole human personality. It is concerned not simply with physique but with mentality and even with character. From another point of view, it regards not only conditions produced by the environment, but those due to the mysterious, and as yet obscure, workings of heredity ; and it has to do with a wider environmental sphere than was formerly considered to be its province, the home, the school, the factory and workshop, and all the manifold and detailed influences of everyday life.

Further, the aim of those concerned with health has widened. The cure and amelioration of sickness must still, unfortunately, occupy a prominent position—even, as regards individuals, the prime position—among those to which they give attention, but the importance of the preventive aspects of medicine, both in public and private practice, is now fully appreciated and widely attended to. Moreover, the practical possibility of a third aim, the constructive enhancement and perfecting of the communal and personal health, the raising of this in its fullest sense to a much higher level than the present average, has more recently been felt both by society and by the medical profession.

These wider aims, fuller conceptions, increased values, have brought about of recent years a silent revolution, the effects of which have been so gradual that by most persons they have been scarcely observed, and have certainly not been fully realized or appreciated. They have deeply affected the social

habits of the people and improved its health ; they have brought many more classes of persons into the field of health work ; they have altered to a considerable extent the general outlook of medical practitioners, and, while preserving the essential individual relationships of medical practice, are making modern medicine the most important of all the social services. Let us consider some of these effects and state some of the problems to which they give rise.

One effect has been to shift, to some extent, the onus and responsibility for maintaining and improving the national health. This responsibility is, in the main, shared between the medical profession, the community in general, and the individual citizen. It may probably be agreed that the surest safeguard of health is still a well-trained and properly utilized medical profession, bearing in mind, of course, both its daily advice and treatment given to individuals and its position as providing expert knowledge and direction for public authorities. This immediate medical responsibility has been greatly heightened by the results of recent research in medicine, surgery, and the allied sciences. New fields have been explored and the possibilities of several old fields materially extended. The most striking instances are, perhaps, immunization against a number of epidemic or infective diseases, the working and control of the neuro-endocrine system (the autonomic nervous system and the glands of internal secretion), the revolutionized study of the working of the human mind, and the treatment of mental disorders, the analysis of foodstuffs and the importance of vitamins, and the new science of

genetics, disclosing to some extent the nature and mechanism of human heredity. All this new knowledge has to be learnt, and, when reasonably established, put to actual use in practice by members of the medical profession.

Yet, in spite of this increase in medical responsibility, it has become evident that a very large responsibility must be assumed by the community acting as an organized whole. It is realized that there are more and more things within the sphere of health which the medical profession cannot, and should not be expected to do, which it is essential should be done, and which must, therefore, be taken in hand collectively by the whole body of society. This, of course, has long been recognized as regards sanitation, water supply, and efforts to control extensive epidemics. It is now admitted as regards housing and slum clearance. As instances in which further and urgent action on similar communal lines is overdue, or is, at any rate, very imperfectly taken, may be mentioned four matters at present very much in the public mind—noise, smoke, nutrition, and physical training. These cannot be placed in watertight compartments: each may materially affect the others. But, by the application of recent knowledge, the community could, if it would, greatly mitigate the evil effects of noise, and it could, if it would, actually abolish smoke as an atmospheric pollution. Nutrition and physical training must clearly be dealt with in relation to one another, and there is sometimes a good deal of ignorance or misunderstanding disclosed in public discussion of the matter. Certainly those who make alarming or exaggerated

statements about malnutrition need to be much more precise in indicating exactly what they mean by that word. It may be admitted that food is the most important factor in nutrition, and the community can to a large extent control the purity, storage, supply, and transport of food, and even, to a smaller extent perhaps, its cost and character ; but other essential factors may be atmosphere, sleep, exercise, and such psychological conditions as freedom from anxieties, fears, and obsessions. It would be well, indeed, that discussion and action should relate to national fitness rather than to national physique, thus recognizing that mental soundness as well as good physical condition is necessary to the making of what is called an **AI** nation.

The immediate point is that all these matters are not the responsibility of the medical profession—though that profession is immensely concerned with them and can do much towards their investigation and betterment—but are part of the functions of the community as a whole ; and that, in so far as this is so, the onus as regards health has passed from individual and purely professional to communal action.

Experience during the present century has proved this to be true also in another direction. The State is increasingly concerning itself, not merely with these matters of general healthy environment, but with attention to the health of the individual citizen and those dependent on him. The establishment of school medical and dental services, involving not merely health inspections but the provision for the treatment of certain conditions which had previously largely escaped treatment, or which could best be

dealt with collectively ; the setting-up of clinics in relation to maternity, infant welfare, tuberculosis, and venereal disease ; and above all the enactment of the system of national health insurance, demonstrate this in no uncertain manner. The immense importance and revolutionary character of the last-mentioned State action has scarcely yet been realized. It indicated not only that the State was deeply concerned with individual as well as with public health (so far as they can be regarded as distinct), but that it was prepared to organize the medical profession, in so far as it was necessary to do so, to ensure that all employed persons had easy access to medical advice and treatment ; and that it preferred to do this by a method which would preserve, as far as possible, that freedom of choice, freedom of treatment, and close and direct personal relationship between doctor and patient, which were consistent with the traditions of the medical profession and which long experience has shown to be great factors in effective professional advice and treatment. In spite of a great deal of initial confusion, and in spite of some not unimportant continuing imperfections, all official enquiries into the working and results of the National Health Insurance system have declared its success, and have recognized the great benefits that such a system brings both to individuals and to society. It is certain that the State will not cease to interest itself in the personal health of its members and in such organization of the medical profession, or such arrangements with that profession, as are necessary to secure this. Already proposals for an extension of the service, so as to

make available for insured persons more specialized fields of medical attention, and to include within the scope of the service other classes of the population, are under discussion, and it is to be supposed—and very much to be hoped—that the fundamental principles already established by this system will not be departed from.

Thus, both by reason of the necessity for communal action in certain large matters of environment intimately affecting the public health, and by reason of the fact that the community has taken a hand in the organization of the medical profession so that health advice and the skilled treatment of sickness shall be available for whole classes of the population, the State and society are assuming an ever-increasing responsibility for general and individual health. Yet the paramount responsibility of the individual for his own health, and, in less degree, for his own local environment, remains. However good the conditions of life may be, and however abundant and easy of access skilled advice as to health may be made, they can be, and continually are, vitiated or nullified by individual ignorance and unwisdom. It is said that of slum-dwellers removed to a new housing estate, though, happily, 75 per cent may be expected to make good, there will be some 25 per cent who will create what may be described as slum conditions in their new homes. There are many thousands of persons who persistently refuse to take advantage of facilities for obtaining medical advice and help publicly and freely provided. There are large numbers of patients who have actually sought and obtained

such advice and help who render it of little or no permanent avail by foolish conduct and gross defects of character. These facts must be borne in mind in any attempt to assess the results of the efforts of the State and local authorities, and of the medical profession, to improve the general health : and hence arises the need for intense and widespread attempts towards health training among the population. Any public attempts in this direction have mainly been of a sporadic character, and have often been misdirected or not very effectively carried out. Skilled organization and direction of public health propaganda are essential ; otherwise the effort will be wasted, and it is even possible that more harm than good may in some cases result. The most effective agencies in the long run will be found to be the schools, and the unostentatious teaching of the family medical practitioner while pursuing his daily rounds. The inculcation of health *habits* in the nursery and infant schools ; the instruction in biology, hygiene, and health *knowledge* in public schools of every grade ; and the encouragement and training in health *wisdom* in later years, are already producing good effects, though the efforts of both teachers and doctors in this direction might yet be more efficient and universal. The individual may be largely or mainly responsible for his own health, yet his responsibility really rests upon the extent to which he has been rightly taught. The duty of medicine to the individual is not merely to be a help in emergency, nor is the duty of society fulfilled merely by providing the doctor to be such a help, or the public

health medical officer to administer certain communal health services. Society by many agencies must provide health instruction.

Another effect of the modern conception and evaluation of health has been a clearer realization of the relation of the preventive and of the curative aspects of medicine to each other. These two aspects can, of course, be distinguished, but it is no longer proper to speak of prevention and cure as contrasts. The old classification of the work of private medical practitioners (whether general or special) as curative and of the work of public health medical officers as preventive was never really accurate, and has now become quite misleading. The members of each of these classes within the medical profession are all continuously doing preventive work, and all are responsible, in some measure, for curative work of an extensive nature. Nor is the distinction between them that the one class is looking after communal interests and the other after individual interests. These interests cannot be disentangled in this mutually exclusive fashion, and both classes of medical practitioner are concerned with the interests of both the community as a whole and the individual patient. The distinction is now seen to be that the public health medical officer is *primarily* concerned with the former and the private doctor with the latter. This is merely a distinction, not a contrast. The extent to which the public health medical officer has to deal with preventive and curative work for the individual, and the extent to which the private doctor is daily concerned with the health of the com-

munity have not yet been fully realized or acknowledged ; but, as I have said elsewhere,¹ “ the public health medical officer is always dealing with the individual for the sake of the community ; the general practitioner is always affecting and helping the community through the individual ”. The closeness as well as the character of the relationship between the work of these two groups of practitioners is thus indicated ; and one of the more important and immediate problems of the organization of the national health is to avoid any tendency to cleavage in this work, to recognize fully and clearly the respective functions of the several classes of medical practitioners, to bring the whole body of general practitioners into intimate connection with public health activities, and, without seriously altering those essential conditions of their work which render it most effective, to utilize to the full all that they, and they alone, can contribute to the organization of the health of society.

The nature of the problems confronting both the profession of medicine and society is changing in consequence of the altered conditions and newer outlook. Medical progress and population changes have alike been very great during the past two generations ; each has reacted upon the other both as cause and as effect. It would be claiming too much if it were said that this era had witnessed the conquest of communicable disease, and yet this is not far from the truth. Widespread epidemics of cholera, typhoid fever, and smallpox, such as used to occur during previous periods of the nineteenth

¹ *Patient and Doctor* (Hodder & Stoughton).

century, have altogether ceased. Infantile diarrhoea, which was annually prevalent at an even more recent period and was very destructive of infant life, has disappeared in the same way. An occasional or periodic pandemic of influenza still mysteriously rages, and measles and whooping-cough still take serious toll of the lives of young children, but diphtheria and scarlet fever are more under control and much less destructive, and the incidence of tuberculosis of the lungs has been reduced by about two-thirds. In other spheres than the control of infective disease, a marked rise in the general standard of living and housing, an advance in habits of cleanliness and personal hygiene, and an increase in medical and surgical knowledge and skill, have produced remarkable results. To express the results of all this statistically and realistically is not very easy. To state that there has been an *average* prolongation of life of 15 or 12 or 7 years at birth or at subsequent ages is not very illuminating and may be misleading. It is perhaps more useful to say that, comparing quite recent years with a similar period just prior to the era named, the mortality rate of the population as a whole has been reduced by one-half, the rate of ages below 15 years by two-thirds, that between 15 and 45 years by 60 per cent, and that at later years by an appreciable but lesser percentage, until even at 75 years and upwards the decline is of the order of 10 per cent.

There are counterbalancing factors or considerations. Since 1871 there has been a heavy and progressive fall in the birth-rate, so that, in spite of the

great saving in infant life, the proportion of the total population under 15 years of age is remarkably less than it used to be. At present babies are being born only in sufficient numbers to replace less than three-quarters of the population in the next generation. Further, mortality figures have little direct relation to morbidity figures, so that the diseases which kill are not necessarily those which cause the greatest amount of sickness of various degrees of severity. This may be illustrated by the rather startling fact that about one-third of the disabling illness of the country is caused by relatively minor, though very distressing, mental disorders. A third counterbalancing factor is sometimes said to be that we are to-day preserving the lives of the weaklings and the less fit. The truth of this statement is more than doubtful, and it is very important that this should be realized. There is no danger that modern sanitary science and medical skill and social care will result in a nation of degenerate cripples. Such a fear is due to a misunderstanding of the scope of "selection" and of the meaning of "fitness". Under the old conditions, as with war, the prevalent epidemics were no respecters of persons. They attacked strong and weak alike, and for every one they killed they left many others less well and less resistant to other forms of disease, either permanently or for considerable periods of time. If, too, impure milk or polluted water caused illness which carried off those who at the time had less innate power of resistance in greater numbers than those who had rather more, it by no means follows that those who survived were more "fit", mentally,

morally, or physically, than those who died. There is no reason to suppose, speaking generally, that those who are "selected" or enabled to survive to-day and to become "fit" and useful citizens are any less in proportion than formerly. Indeed, the contrary is the more probable.

Two conclusions, of great medical and social importance, emerge from these facts. One is that the population is becoming steadily older, and that though, at all ages, life is on the whole healthier, this results, amongst other things, in a change in the character of prevalent illness, and therefore in an altered emphasis for social and medical endeavour. Instead of typhoid fever and anaemia, society and medicine have to combat cancer and chronic rheumatic conditions, and the psychoneuroses caused by fears, anxieties, and obsessions. So far there is insufficient provision for dealing with any of these, though such provision as there is in each case is having a very considerable measure of success. It will be noted, too, in each case again, that preventive work and early treatment are paramount necessities.

The second conclusion is that maternity is becoming of more and more importance and value. Even to maintain the present population, and taking into account the proportion of inevitably sterile marriages, the average family should contain at least four children, and safety lies in these being born at an earlier period of married life. No organized effort has yet been made to get the nation to realize these facts. On the contrary, all organized effort has been directed towards a campaign which is almost bound to result in a less number of children

being born, and to a postponement of their birth till a later maternal age. The State has taken some piecemeal measures intended to promote the giving of ante-natal advice, and the local authorities of certain towns have made increased provision for the hospital treatment of maternity cases, yet, during the period that such opportunities as these have been increasingly taken advantage of, the rate of maternal mortality in this country has risen. It is evident that it is not on these lines that the safety of motherhood is to be secured. The causes of a maternal mortality which is still too high may certainly be biological, sociological, nutritional, or psychological, as well as purely clinical. No adequate organized enquiry has yet been made into these causes, and the time is overdue for society to establish such enquiry, and for the State to provide a fully equipped maternity service on national lines which will make available for every mother all those medical and ancillary requirements necessary for her during the whole period of maternity, based upon the skilled and careful attention of general medical practitioners and midwives in normal cases.

In this chapter I have stated the modern outlook of medicine consequent upon recent developments, and indicated the increased responsibility of society as a whole for the promotion of national health. I have suggested also what seem to be the most urgent of the tasks to which both medicine and society should direct attention. The objects may be said to be not merely the prolongation of life, which has already been accomplished, but safe

MEDICAL PROGRESS AND SOCIETY

birth and healthy survival—"healthy" in this connection being interpreted to mean characterized not by the absence of disease only, but by the development to the fullest extent possible of the whole powers of each human personality.

CHAPTER IX

EDUCATION, AND THE SCIENCES OF HUMAN NATURE

EDUCATION to-day is a rather overworked fairy godmother to whose lap all harassed reformers and well-wishers of the human race constantly bring their unmaterialized dreams. In the midst of passing a prison sentence the magistrate pauses to reflect what education might have done ; the doctor sighs over a case of incurable disease that knowledge would have prevented ; the industrialist demands clever, trained minds ; the statesman, struggling with a sorely strained civilization, turns from the botched and exhausted minds of adults to the promise of youth in the schools.

From being a dull subject, overcast with the dismal classroom recollections of a cheaply and nastily educated generation, education has become the centre of a thousand human interests and hopes. That devotion is justified, for education has shown that where war, revolution, economic manipulation, and even organized religion have failed, it can improve the human lot.

Is Education to be considered a science ?

To include a section on education among the



DR. R. B. CATTELL

biological sciences is at once to provoke disagreement from many venerable institutions which tacitly regard education as an art and a tradition. That the practice of teaching is an art cannot be denied, but like the arts of gardening or of medicine it must pass beyond dependence on rule-of-thumb traditions to the surer basis of science.

Logically, education is an applied branch of the pure science of psychology. On the one hand we have the individual child : on the other the body of learning and ideals with which he is to have fruitful relations. The old-fashioned teacher forgot about the first half of the proposition altogether. The modern educator realizes that progress must be based on a scientific understanding of the emotional and mental make-up of each mind, on the laws of human development and a precise knowledge of the limits of human variability.

But many who realize that psychology is the basis of this half of the educator's problem are not prepared to think that it has any voice in educational ideals. It can choose the means but not the ends. Even so able an exponent of progressive education as Sir Percy Nunn says " it is not a function of the psychologist to decide whether there shall or shall not be compulsory Latin in the secondary school ". I shall hope to show in what follows that, on the contrary, psychology has something to say about the values of different goals, since, as I have shown elsewhere, science is in fact a means of deducing moral values.¹

¹ " Ultimate Morality and Natural Science ", ch. iv. in *Psychology and Social Progress*. London, 1933.

Biologists in general have been the quickest to perceive that immense advances in education wait upon the discoveries of psychology. Professor Julian Huxley in a recent address remarked, "if scientific research in psychology were applied to education it should be possible to bring up a generation which would be practically free of difficulties due to complexes, which would live a saner and happier life and which would not be prone to capture by the emotional slogans of this or that party".¹

Although the leading thinkers in education already share this vision of a planned, progressive education positively founded on the rock of scientific advance, our practice is bound to lag sadly behind ; first, because psychological research is very poorly endowed and, secondly, because a great many educational endowments are tied up in reactionary strongholds amidst our untidy and haphazard heritage of educational institutions. Historians will tell you that few institutions are more chaotic and muddled in growth than the English educational "system". It is a story of many independent impulses from widely different origins and from men of very different characters. Our secondary education is partly a product of the public schools and still bears the stamp of such men as Thring and Arnold of Rugby. The elementary schools combine the secular stamp of Bell's National Schools with Lancaster's British and Foreign School Society. Women's education has independent roots in the labours of Miss Buss and Miss Beale, whilst the kindergarten has a life of its own springing from Montessori and perhaps Rousseau.

¹ See H. G. Stead, *Full Stature*.

The traditions which sit uncomfortably side by side vary from those of chivalry to those of the monastery, from the classical trivium of Aristotle to the vigorous rationalism of the Yorkshire Mechanics' Institutes. They spring from personalities as diverse as Locke, Komensky, Froebel, Pestalozzi, and Baden Powell. The dim presidency of the Board of Education cannot hide the fact that the organization of our educational system is a miracle of patchwork, quainter than a mediaeval city in a quarter of a modern town, a delight to the historian but an obstacle to sane planning.

If the age of spacious planning is to come; if the hard-won results of the study of child psychology are to be made available for all, some demolition of this encrusted chaos and a deliberate removal of debris is necessary. The exasperation of the scientific educator with, for example, Dr. Norwood's *The English Tradition in Education*, is not so much with the actual practices, many of which receive support from psychological research, but with the spirit of obstinate tradition on which they are based. It is not that they are wrong but that they are irrationally arrived at, inexplicit, slovenly in thought, and incapable of discussion with a view to progressive evolution. It is this quality which leads many to agree with Bernard Shaw in his uncompromising statement that it would be best "to raze these unvenerable institutions to the ground and sow the foundations with salt".

For the world moves on, however obstinately the reactionary may dig his heels into the ground.

HUMAN AFFAIRS

Alterations affecting the whole structure of civilization have ensued from the systematic application of the physical sciences to production and communication. To accept the gifts of science without giving its spirit a proper place in education means the inevitable retribution of a plague of human and social problems—slums, unemployment, industrial unrest, and suicidal developments in warfare. Education must capture the patient, rational spirit of science, and it must be scientifically planned in regard to the values and needs of the modern world, without prejudice from tradition.

There exists a common misgiving that a scientific organization of education must mean an impersonal, mechanical system capable of producing only soulless automata. This is a piece of slipshod thinking reminiscent of "sympathetic" magic. Actually the reverse is true: the more highly organized the machine the more fully it caters for the expression of individuality. The gifted child, the retarded child, the child with peculiar talents—all these have better opportunities in a city possessing psychological systems of classification, promotion, and techniques for the analysis of developmental difficulties, than they would be offered in the narrow atmosphere of the village school.

EDUCATIONAL IDEALS

Naturally, the goals of education must be defined before the methods of attaining them can profitably be mooted. Definitions are countless, but one of the most oft recurring is "the creation

of a good citizen". None can be found which does not in some way beg the question by importing the purely implicit values of the existing civilization.¹ Is the end product to be a good Fascist citizen, or a good Communist citizen, or a good Christian? Some definitions obviously imply that education is partly propaganda, but what is too easily forgotten or obscured is that all education involves propaganda. Many a keen, natural teacher will find at the root of his zeal the desire to implant some passionately adopted philosophy of life. When the *Encyclopædia Britannica* desires a comprehensive definition of education it can produce only the following description of what is essentially propaganda: "an attempt by the adult members of a human society to shape the development of the coming generation in accordance with its own ideals of life".

Professor Heath objects that this is only "training", and he voices the viewpoint of most progressive educators that education is something beyond training in accepted ideas and the imbibing of

¹ Except perhaps the magnificent passage by Thomas Huxley in which he says: "The life, the fortune and the happiness of everyone of us depend upon our knowing something of the rules of a game infinitely more difficult and complicated than chess. The chessboard is the world, the pieces are the phenomena of the universe, the rules of the game are what we call the laws of nature. The player on the other side is hidden from us. We know that his play is always just, fair, and patient. But we also know to our cost that he never overlooks a mistake, or makes the smallest allowance for ignorance. To the man who plays well, the highest stakes are paid, with that sort of overflowing generosity with which the strong shows delight in strength. And one who plays ill is checkmated—without haste but without remorse. What I mean by education is learning the rules of this mighty game."

suggestion. Yet these progressive educators are no less prepared to use the schools for propaganda—of a different kind—themselves, a fact which is recognized with characteristic honesty by one of the most eminent of them, Bertrand Russell, who, when sponsoring a more enlightened view of society, says “the battlefield is the school”. The same dangerous philosophy is confessed by the President of the Board of Education when he remarks that the schools should not be slaves of existing social standards but creators of new ones.

The danger of such views has not escaped the trenchant logic of Sir Percy Nunn when he asks if we are prepared to let the schools adopt social, religious, and political aims differing from those of the society of which the schools are the servants. The answer must be that we are; for, clearly, the rising generation has to be educated for the world of to-morrow. A minimum of propaganda *per se* has therefore to be accepted as a logically necessary part of education, but who shall decide what direction it has to take? The teachers will in general be a little ahead of the parents and more in touch with the nucleus of leading thought in their day, so that in practice, granted tact, the problem generally solves itself.

Intuitive solutions in practice must not blind us to the fact that philosophically we have left the matter at an impasse. From this the most progressive teachers have thought to escape by suggesting no view with authority to the children, but by giving them instead the habits of reasoning and the material to reason upon. Thus W. B.

Curry, headmaster of one of the most famous of the "New Era" schools, argues: "The power of dealing intelligently with difficult and controversial issues should be one of the main results and objectives of education". His school lives up to this precept by giving no religious instruction before adolescence. In the sixth form the youths and girls may hear the Dean from the cathedral one week, Bertrand Russell the next, followed perhaps by a Hindu or a Russian Communist.

Even this is an implanting of the teacher's own attitude to life—an attitude of curiosity and a philosophy of arriving at truth by reasoning. It is impossible for the educator—through example, precept, and the contagion of his own unconscious mind—altogether to avoid being in the widest sense of the term propagandist in regard to the values for which he himself stands. He would not wish to be otherwise if chief among those values is the desire to arrive at truth for its own sake.

Explicit suggestion of ill-founded views, misusing the teacher's prestige, must be rigidly excluded from the schools, but education is bound to enshrine the enduring values of the past which have stood the assaults of time and the fires of rational discussion. In perpetuating such traditions they must never forget that their main concern is to create men and women of enquiring and open mind and to give education a bias towards the position which, so far as can be anticipated, the changing world will have assumed by the adulthood of the coming generation.

FOOD FOR THE CHILD MIND

Even persons who have spent the first quarter of a century of their lives undergoing systematic education are commonly regarded, by themselves and by others, as still inadequately educated. They have learnt useless things they ought not to have done and left undone those things which are essential.

Yet life is too short to give more to systematic schooling. A human being has barely reached that fifth ripe stage which Shakespeare describes, "full of wise saws and modern instances"; barely achieved that working knowledge of science and literature, some judgment, kindness, and self-control which fit him to serve civilization, when his powers begin to wane. Dr. Wynn Jones recently summarized the psychological researches dealing with the growth and decline of human capacities, and it cannot be denied that his conclusions confirm in the main the dictum of William James "that in the average person old foggydom is already discernible at twenty-five", or the still earlier generalization of Möbius that after adolescence most people incur a mild degree of mental deficiency.

Life being short, and the time which the State is willing to allot to the education of its citizens being even shorter, we can brook no wastage on subjects of little value or habits of doubtful use. As the engineer turned to the physicist for greater power, so the teacher turns to the psychologist with new hope of attaining, through an understanding of the human mind, that devoutly to-be-wished goal of

producing an educated man whilst yet the spirit is unfatigued.

Consequently the psychologist has made many illuminating researches into the growth of abilities, into the best methods of acquiring such manual skills as writing and such mental skills as reading ; also into the improvement of memory and the training of habits of reasoning. The slow but sure advances in education to which these methods are leading can be seen in Professor Hamley's *Yearbook of Education* and the *British Journal of Educational Psychology*. They have also brought some order into the increasingly intense discussion of the subjects of the curriculum. It is some years now since the psychologists knocked the bottom out of the argument that Latin and Greek, although having no utility or literary value for most transient students, had value as " a training of the mind ". There is extremely little transfer of logical habits from these to other subjects ; the " disciplinary value " is a myth. Nevertheless the practice of selecting the most suitable candidates for administrative posts demanding high intelligence through examinations in classics is proved to be sound, for success in classics, more than in any other subject except mathematics, is dependent upon a high level of constitutional mental capacity.

The researches which discovered the nature of intelligence and led to accurate means of measuring it have made possible a fair adjustment of opportunity to ability, and introduced a new accuracy into school classification and promotion which annually saves a great wastage of individual lives.

One of psychology's unexpected services has been the abolition of false aims. It was bad enough that much of the teacher's energy was frittered away in trying to expand an untrainable mental capacity or to interest children in skills for which their intelligence was too high or too low ; but it was worse that the child's nature was often warped in the process. The fad of " sense training " and many other misconceptions of that kind have been, through the application of experimental techniques, brought to a right proportion and relation to educational aims.

Experimental psychology has contributed most to intellectual education, to the understanding of capacities and skills, but it has not been without influence on character education too. For, in the first place, false expectations of intellectual performance frequently lead to emotional maladjustment and delinquency or to a permanent temperament of defeat in the child. Thus borderline mental defectives, mis-classified in ordinary classes, are found to have a high delinquency rate, but when given appropriate education in special classes they develop normally.

Present educational policies express a strong movement away from the purely academic conception of education. The trend is particularly associated with such men as John Dewey, but it also expresses a general realization among teachers of the implications of the intelligence distribution curve and the association of abstract interests with high mental capacity. Otherwise expressed, it is the recognition that many boys and girls can learn through their fingers better than from books. Culture and enjoyable self-expression for the boy of average

intelligence lies quite as much in hand-work, craft-work, gardening, etc., as in classics or mathematics. Again, it springs in part from the democratic philosophy which sees cultural value in other than literary or "academic" subjects and maintains that all forms of learning should have equal status. Even Aldous Huxley joins in this homage to the "low-brow" when he objects "the existing system suits only that relatively small section able to think analytically, to make use of abstractions".

This revolt gathers force on another front from the very justifiable parental objection to the grammar school tradition of vocationally useless education, or, to be precise, of education commercially useless except for the profession of a school teacher. But perhaps this denial of the description "higher" to the more abstract studies has gone too far. One recent book on universities evidently thinks so when it tilts a stubborn lance at American universities which include in their curricula "newspaper practice", "wrestling and self-defence", and "practical poultry-raising". In so far as the last attitude is a snobbish one persisting from the moribund aristocratic tradition of a "gentleman" as one doing no work save "hunting, shooting, and fishing", it deserves no defence. If it is an intellectual snobbery depending on an admiration for pure intelligence, it has its place in a proper scheme of values.

It is impossibly profitable to discuss the curriculum without facing this opposition between a liberal education for life and leisure on the one hand and vocational training on the other. In principle and in

the hands of a skilful teacher, vocational education can be made liberal and cultural. Wordsworth expressed a simple but profoundly important truth when he said that the understanding of a "flower in the crannied wall" implied an understanding of the whole universe. Anyone who has heard farmers in a country tavern discussing a common sheep will realize what a wealth of science, literature, and philosophy can be conveyed in a vocational education.

Originally, liberal education was "for the sons of gentlemen", and vocational education for the fodder of industry, a fact which has twisted subsequent discussion with emotional conflicts; but with the rise of democracy and the growth of leisure these two objectives have come to shape education for every man. He leads a double life comprising work and leisure, and, since the latter promises to play a larger rôle, educators have lately been speaking more and more of "education for leisure". A special aspect of this development lies in adult liberal education in University Extension lectures and the Workers' Educational Association (which is by no means only a working-class movement).

Education for leisure is important also because it is education for citizenship. The modern world has become a very complex concern in which the unquestioned loyalties and "blinkered" world views of our fathers are no longer assurances of happiness, still less of preservation from destruction. If democracy is to work efficiently the new leisure has got to be used to give men a new understanding of their environment, physical, cultural, and

political. At present it is being used as an opportunity for psychological escape from a misunderstood reality by means of the make-believe of films, thrillers, and heaven knows what variety of opiates. These are doubtless in turn the symptoms of a loss in faith, a "social melancholia",¹ arising from the failure of education to give a progressive outlook and an integrated world picture in a rapidly changing society.

Though the above guiding principles are commonly accepted by educational administrators, the curriculum is not very often brought into touch with them, and we are lucky if our education is not more than a generation behind the needs of the modern world. Any attempt to introduce new subjects is received by teachers of long-established items in the curriculum with that cold hostility which greets a newcomer to a crowded railway carriage. To suggest that certain subjects should be cut down to the point where the pupil gets "a good general idea" of them is to offer a personal insult to the teacher whose subject is in question.

Yet ground must be ceded. The subject on which the life and happiness of everyone depends more than any other—biology—is even now only beginning to find a place in many Public Schools. Civics and economics are surely more essential for the average citizen than Latin, Greek, the higher developments of chemistry, physics or mathematics, or an ineffective second foreign language; yet the sixth forms which teach them are in a very small

¹ See *The Fight for our National Intelligence*, by the present writer. P. S. King & Co., 1937.

minority. Psychology, again, has a very wide cultural value, touching as it does practically every branch of human activity, and it can have considerable personal value as mental hygiene. As a science it has advanced greatly since Graham Wallas wrote: "I myself believe that a very simple course in the well-ascertained facts of psychology would, if patiently taught, be quite intelligible to any children of thirteen or fourteen who had received some small preliminary training in scientific method". I know only two grammar school headmasters who have introduced the subject, but their delighted reports justify the belief that it is a valuable innovation which will spread. A most vexed, and therefore neglected, subject is that of general sex education. Since adults spend so great a part of their time dealing with matters deriving from human sex life, and since their happiness depends so much on a wise handling of the associated problems, it is a staggering thought that, in spite of many sane and capable treatises on sex education, our schools are completely silent on the matter.

Whenever educators are gathered together in a hopeful spirit to construct a new curriculum on a rational basis, it is certain that their deliberations will very soon be brought to a halt by a dread shadow. It is the shadow of the examination system, which, with its endless coils, comes to strangle all new-born tendencies. By a system of leaving and entrance examinations each educational institution dictates the curriculum of the school which feeds it and suffers interference in turn from the institution above it. There is an accepted "pecking

order" as among barnyard fowls. Some universities enforce the teaching of undesired and undesirable subjects in grammar schools. Secondary schools pass on the blows to junior schools, and these domineer over the infant schools, demanding absurd standards of academic performance which tie infants to desks when they should be learning through play. Since progressiveness of spirit and attention to the psychology of the learner are highest in the nursery schools and lowest in the universities, the deplorable results can be imagined.

Teachers constantly sing hymns of hate to examinations,¹ parents deplore them and children are sometimes broken by them, and yet, though psychologists have for years patiently held out effective alternatives to these wrangling parties, no determined effort has been made to conquer the incubus. In the first place it is necessary to think clearly as to what the examination is for. Is it intended to test the efficiency of the teacher, or the mental capacity of the child, or the candidate's possession of a necessary minimum of information and skill? Elementary school examinations of the "payment by results" days had the first purpose: no examination yet known can fulfil it. Scholarship examinations have the second object: it would be far more effectively attained by psychological tests of intelligence and temperament. The School Certificate has the last-named purpose: it would be fulfilled with far greater reliability and justice to the candidates by an "objective type" examination.²

¹ See *An Examination of Examinations*, by Sir Philip Hartog.

² *Op. cit.*

Thus throughout education there is to-day a clash between muddled traditions and a clear philosophical analysis of aim backed by the application of scientific psychology. G. K. Chesterton in his recent autobiography refers to his education as "being taught by people I didn't know, things that I didn't want to know". But the worst indictment of that type of education was that the teachers evidently didn't know him: it was before the days of intelligence tests.

If education is a process between a child on the one hand, and a body of learning on the other, it is essential that both should be understood by the person who is to bring them together. That is possible only on the basis of a psychological study of the mental and emotional development of the child. The growth of planning in education in place of unquestionable rule of thumb, the working-out of a sane curriculum and effective methods of character education, depend on such studies. But when we look for the machinery which is to foster that research and ensure its application in the schools, we look for the most part in vain. Our schools are partly under the control of a central body of specialists, the Board of Education, which more by accident than design includes one or two psychologists among its technicians; and partly under local committees of worthy citizens whose zeal is seldom in question, but whose ignorance of the science of education is only exceeded by the stubbornness of their prejudices. As may be imagined, the combined action of such bodies is far from happy and still further from that which would

be easily attainable by a committee of trained educational engineers.¹

THE EDUCATION OF CHARACTER

Whilst the laboratory psychologist with a cunning paraphernalia of test devices has been contributing much to methods of organization and teaching, the psycho-analysts have made what some consider a still greater contribution by their revolutionary views on character education. Unfortunately, perhaps, these views were pertinaciously ostracized from the State schools, whereas the works of the laboratory psychologist, being more patently based on scientific method, were accepted. The result has been that these rejected views have found emphatic and sometimes exaggerated expression in "freak" schools outside the State system. Beginning with such pioneers as Homer Lane and A. S. Neill, the movement seized with the force of a religious revelation many progressive educationists. Only after its very real success had been demonstrated for years in these experimental schools did its spirit begin to find a way, unobtrusively yet powerfully, into the State schools.

The views for which this school of thought has stood (and which are commonly thought of in connection with the New Era and the New Education

¹ This may be illustrated by the recent reports on Co-education which show an abysmal ignorance of all the researches of Havelock Ellis, and which led to no development of co-education because of local misunderstanding by committees.

Fellowship) comprise a considerable extension of freedom and self-determination for the child ; the avoidance of repression and fear-inspired conformity which distort character and may lead to neurosis or delinquency in later life ; the fostering of initiative and creative expression ; the abandonment of competitive methods of evoking interest ; the substitution of self-government or a comradely relation to the teacher for authoritarian discipline. With these, on the method side, go such appropriate techniques as Caldwell Cook's *Play Way* and the Project Method or Dalton Plan.

To give the psychological justification for such a radical attack on conventional school methods and parental privileges would require a more thorough treatment than can be given here. It is to be found in textbooks of psycho-analysis and the case records of Child Guidance Clinics, or, most succinctly, in the living products of such education.

Educational history shows that in fact the movement is older than psycho-analysis. It goes back at least to Rousseau and has roots among intellects of very diverse training. John Stuart Mill attacked the authoritarian practice by his adequate observation that " strong-willed parents have weak-willed children ". Spencer took another step in advocating an appeal to the child's own experience in " the discipline of natural consequences ". Thomas Huxley stated an essential feature of true character education when he said, " It is better to go wrong in freedom than right in chains ".

More recently a fresh root lies in Dr. Montessori's practice, in which the teacher's art consists in effacing

herself whilst the child experiments. But essentially the impulse came from analytical psychology, both from Freud's discoveries of the unconscious and Adler's insistence on the inferiority neuroses as products of competitive, "asocial" atmospheres. It took pedagogical shape in the writings and practice of Homer Lane, Neill, Pfister, G. H. Green, Susan Isaacs, and Bertrand Russell. In a general sense it was implicit in the writings of Bernard Shaw and particularly explicit in his retort to the Public Schools that "the vilest abortionist is he who seeks to mould a child's character".

The early hostility of State schools to such principles was by no means motivated entirely by conservatism or stupidity. There were many able teachers willing to agree that the better part of discipline is self-discipline or that the child's natural interests are the only real basis for permanent learning, but it was not possible to accept natural principles in an unnatural situation of one teacher trying to give individual attention to fifty or sixty children.

True, a few stragglers of the old guard still confuse the word discipline (from the Latin, "I learn") with punishment, and punishment with corporal punishment, but in general it is correct to say that the cane has become a museum piece and its use a complete confession of the teacher's lack of skill in handling the child. Quaint misunderstandings of the modern viewpoint survive, however, as in the case of a famous German headmaster who told me that he reserved corporal punishment for really serious offences. Those are precisely the offences indicating a mal-development of character needing

a thorough analysis of the emotional problem in a psychological clinic.

Again, there are others who avoid starkly repressive punishment but who freely pride themselves on the dominating effect of the teacher's personality. As Ballard points out, the beloved phrase "personality of the teacher" has been brought forward as a stumbling-block to practically all advances in education, from the training of teachers to the introduction of individual work for children; and he adds with exquisite irony the common objection to free discipline that "the children, instead of assimilating the teacher's superior personality, are engaged in developing their own inferior personalities".

Under the older system the two most frequent learning motives were, clearly, competitiveness and fear. Of the former Sir Percy Nunn has aptly said that "competition, like alcohol, though it may begin by stimulating, tends to bring men in the end to one dull, if not brutish, level". No original or creative masterpiece has ever been produced by competition alone, for competition means a paralysing concentration on some conventional race, draining away all free energy from creative or explorative activities. Moreover we are apt to think of the effect only upon the child at the top of the list. If the present generation of children is brought up studiously on these two master motives, we must not be surprised if the society which they create as adults is full of anxiety and hate, acquisitiveness and envy, jealousy, and the aggressive philosophy that might is right.

For training animals or educating children fear

is always the tool which comes most easily to hand, and the temptation to use it is productive of rationalizations for its use. The fearless child, fitted out, as Russell advocates, "with a bare minimum of necessary polite habits", is often intolerable company for an adult. For such reasons many enlightened teachers are held back from studying the true interests of the child's development, having regard to the reactions of educationally ignorant school governors whose highest praise when visiting a school is that it has the characteristics of a graveyard—order, tidiness, silence.

Unfortunately such educationally uninformed people are apt to judge the product of education by its appearance at unfinished stages, as a person ignorant of art might condemn the roughly blocked-in painting of a masterpiece. Parents in particular, either out of psychological dullness or from a more excusable determination to place adult comfort above childhood needs, try to lead the child along the most direct path to the adult virtues of orderliness, carefulness, industry, and wisdom. Yet in climbing a steep gradient the direct path is not the best.

Education of the parent is consequently coming more and more to the front as an important element in the character education of the child. That was one of the first contributions of experience in Child Guidance Clinics, which, as one wag has said, have been thus named to hide the fact that they are parent guidance centres. Research in character psychology suggests that nine-tenths of the child's character structure emanates from the home situa-

tion, especially during the child's first five years. It is, therefore, a sharp reflection on the craziness of the modern world that children from good homes are commonly sent away to school, whilst those in homes lacking every economic, cultural, physical, and psychological necessity for healthy development are left at home.

THE PUPIL

Civilization is an ebullition of living ideas which arises when a heritage of culture makes contact with human beings of sufficient mental capacity to appreciate and manipulate the beauties of that culture. A gifted savage on a lone desert island does not constitute civilization, nor does the British Museum Library without a soul in it. Though both the mass of culture and the living brain are equally essential, the educator gives no more thought to the second of these than he does to the equally essential air that he breathes.

Yet he cannot afford to neglect the second ingredient, for recent population studies show that the biological character of the brains which constitute the school population may alter significantly in a generation. It is futile to give thought and money to the buildings and equipment for the next generation without taking thought for the quality of the school children who are to inhabit the buildings. Educators are just awakened to the need for observing population study statistics to calculate the future size of classes ; they may not waken for some time to studying the quality element in birth-rates.

Owing to social conditions over which the schools have no direct control, the more intelligent members of the community restrict the size of family, and do so unconsciously to the point at which they are failing to maintain their numbers. On the other hand the less gifted strains do not so frequently practise restriction, whilst the borderline feeble-minded have families on an average twice as big as those having normal intelligence. The inevitable result is a marked increase in the proportion of places occupied by the relatively defective in intelligence and a fall in the national average of mental capacity.¹

Since education is becoming more and more "child-centred" and the curricula closely reflect the mental promise of the children to be taught, it follows that such differences of birth-rate as lead to differences of biological quality in the population will result in unavoidable alterations in the type of education provided.

If the educator remains indifferent to the sources of the raw material for his art, not only will he find his curricula forcibly modified but his general ideals of the good citizen will be similarly debased. The New Era educationists, we have seen, regard "the power of dealing intelligently with controversial issues" as one of the aims of education. Unfortunately this is not a product of education but of innate mental capacity. Education can only prevent its stultification. Again, when Olive Wheeler says of democracy, "There is only one way in which the danger of the exploitation of the suggestibility of crowds can

¹ See *The Fight for our National Intelligence*. P. S. King & Co., 1937.

be lessened, and that is through the education of individuals", she is perhaps demanding more from the fairy godmother than the latter's unaided efforts can supply. Under any system of education the persistent characteristics of the feeble-minded are suggestibility and lack of adaptability. People who are going not merely to resist, but discreetly to choose from among, the mass of commercial and political slogans and suggestions to which they are exposed, must have a good education on top of adequate mental capacity.

To look at it another way: education may be regarded as being, up to a point, a good substitute for native wit. The exchange naturally works both ways. People of great native intelligence again and again show themselves able to become successful or cultured people with little or no systematic schooling and often on the basis of a very unsatisfactory home background. I recently read three autobiographies expressing each writer's ultimate philosophy of life. Their backgrounds were utterly diverse; one was from a cultured academic family, one a member of the aristocracy, and one a self-reformed criminal.¹ They had in common, however, a mental capacity far above average, and, in spite of the last being brought up as a street arab and the first in a smooth path to the university, they had come to strikingly similar conceptions of man and his universe.

Good intelligence can so triumph over a bad education, or defective capacity so vitiate a good one, that the educator who ignores the provision

¹ Mark Benney, *Low Company*.

of an adequate mental capacity is an extremely foolish man.

.

If education is a science, it is no narrow science. It is not "educational psychology" but the psychology of child development, psychotherapy, and that study of the whole social organism which falls under social psychology.

Before education can become a science, a conflict has to be fought out with pre-scientific institutions. As Professor Wheeler has admirably said at the close of her book on education, "Human Nature being what it is, there must either be adventures of peace or adventures of war". Education provides a battle-ground for anyone who will take the initiative, and its adventurers are going to shape the world of to-morrow more positively and creatively than the leaders of material armies.

CHAPTER X

SOCIOLOGY AND HUMAN AFFAIRS

SOCIOLOGY is the study of society, that is to say of the whole web or tissue of relationships into which human beings enter with one another. The term society and the adjective social stand in this connection not only for the co-operative or friendly relations between men but also for those relations which in one sense of the word are unsocial or anti-social, the relations of antagonism, hatred, competition, indifference, hostility. Social relations are sometimes described as implying the recognition on the part of those who enter into them of some community of aim, some sense of belonging together. But though it is true that people cannot enter into social relationships if they have nothing whatever in common, if they are not capable, for example, of wanting the same things, yet it is obvious that their very power of wanting the same things may lead them to conflict and the desire of mutual destruction. Nor are social relationships confined to conscious or deliberate dealings of man with man. The lives of individuals are in fact affected by relationships of which they are only dimly aware, and of which they can, even with the most



PROFESSOR M. GINSBERG

strenuous effort, grasp only an infinitesimal portion. It is no small part of the sociological problem to show how men contribute their share to the common life of their society without any very clear realization of the structure of the whole to which they belong, or of the repercussions of their action on the lives of others. Sociology, then, is concerned with society in the widest sense in which it includes all dealings of man with man, whether these be direct or indirect, organized or unorganized, conscious or unconscious, co-operative or antagonistic.

It is concerned in particular to show how out of *society*, the whole network of human relationships, there arise *societies*, that is to say definite collections of individuals standing to one another in defined or special relations which in a measure mark them off from others who do not enter into these relations. The first task of sociology is to describe and classify these different types of societies, and to determine the conditions of their growth and decay and the relations in which they stand or come to stand to one another. One of the pitfalls of workers in this field has been the tendency to personify social groups, to exaggerate the unity that belongs to them, and to ascribe to them ends and purposes distinct from the ends and purposes of the individuals composing them, and thus to obscure the fundamental fact that behind societies there is always society, and that many important and highly significant human relationships have not so far been embodied in definite organizations. The business of the sociologist is to go behind social groupings and institutions to the human relation-

ships which have engendered them, to show how these social formations actually affect the lives of the individuals out of whose needs, struggles, and aspirations they have arisen.

The claims of sociology to scientific rank have been disputed on several grounds. It has been argued, in the first place, that human affairs, being the expression of the will; are indeterminate and therefore not capable of reduction to scientific laws. The objection has taken numerous forms. Sometimes it is urged that the freedom of the will introduces an element of chance which makes the notion of law or orderly sequence inapplicable to social life. Sometimes stress is laid on the rôle of "great men", and it is argued that the decisive events in history depend on the quite incalculable intervention of a few or even of a single individual, and not at bottom on the interactions and interrelations of the masses which the sociologist pretends to study. The great man himself on this view is beyond the reach of scientific analysis. As a unique individual he can be apprehended, if at all, by something akin to instinct or intuition; but not by the ordinary methods of intelligence. This notion of individuality or uniqueness is sometimes applied to complex historical events or even to whole peoples or periods of history, and it is maintained that it renders any generalized study of the forces at work in human evolution impossible, and that all that can be done is to give an intuitive interpretation of each such individual complex of events. If this be a true account of what the historians do, it would seem to follow that the sociologist will not be able to use the results of

historical investigation as a basis for sociological generalization, and thus presumably sociology would not be in a position to deal scientifically with the problems vastly important for it of social change and evolution.

The issues here raised are extremely complicated, and here I can only deal very briefly with a few salient points. The element of indeterminacy or contingency in human life need not be denied. Without raising the difficult problem of its precise philosophical significance and how far it is compatible with the existence of orderly relations, it is sufficient to point out that while indeterminacy may make it difficult to forecast with certainty the behaviour of a particular individual, it leaves the problem of the behaviour of large masses open to investigation by the aid of statistical methods. The problem of the freedom of the will may well be left to the philosopher. The sociologist cannot assume that freedom and law are incompatible, or that the laws which govern social behaviour and social groupings are necessarily identical in character and form with the laws with which physicists operate. That there are regularities is a matter of empirical observation. Whether these regularities are due to the cancelling-out or balancing of individual variations in behaviour in large numbers, or whether they depend upon determinate patterns of connection, can only be ascertained by refined sociological analysis of the facts and not by general philosophical speculation.

The part played by great men has been discussed *ad nauseam* by historians and sociologists, and what-

ever the conclusion arrived at it is not such as to render unnecessary investigation into the conditions which affect the complex interactions of men in the different forms of human grouping. The great man himself has to reckon with these conditions. If born out of time he may easily be ineffectual. Great politicians may occasionally play a decisive part. But on the whole, history does not reveal them as arbiters of events. Bismarck, who by all accounts must be reckoned as having exercised an enormous influence on the political events of the nineteenth century, remarks : " The statesman can do nothing of himself. He can only lie in wait and listen until amid the march of events he can hear the footsteps of God. Then he leaps forward and grasps the hem of His garment. That is all he can do." In the history of religion there are no doubt numerous instances of the adoption of new creeds by large masses of men at the arbitrary bidding of kings or chiefs. But as the history of the spread of Christianity abundantly shows, the creed adopted had to come to terms with the existing beliefs, and had for long only a perfunctory and superficial influence on conscience and conduct. The founders of the great religions themselves, it may be added, whatever views may be taken of the originality and novelty of their contributions, rarely succeeded in imposing their ideas upon large masses of men in their own life. It generally takes several centuries before their influence is widely felt, and by that time their teaching has been profoundly transformed and has absorbed many elements often quite foreign to its original spirit. In sum, even if great men are not

entirely the product of their time, they have to come to terms with the conditions prevalent in their time, and they are effective only in so far as their work is the vehicle of large and massive forces. It is clear, I think, that the rôle of men of exceptional ability or genius in the life of society is not to be decided by *a priori* arguments but is itself part of the problem of sociology. We need to know whether the proportion of exceptional ability produced by a given race is constant over long periods of time, or whether mutations occur under specified conditions. If the former alternative is true, are we to account for the apparent variations in their distribution over time by differences in the opportunity offered for their development or expression? Is it possible that there are always the same qualities present in a population but that some of them remain dormant, unknown even to their possessors, awaiting the stimulus of exceptional circumstances? In more general terms, are changes of a group and its relations to other groups determined by changes in the inborn characters of their members, by the presence or absence, for example, of qualities of character and temperament making for leadership, innovation, or conservatism, or are social changes independent of genetic changes? Only a comparative sociology giving the life history of different types of society accompanied by a genetic analysis of mental characteristics can supply an answer to these complicated questions. Problems of this kind belong to the department of sociology to which the name of social biology is coming to be attached.

It follows from this brief discussion that the part

played by individuals, including the exceptional individuals we call great men, is not beyond the range of scientific investigation. Similar remarks apply to the alleged uniqueness or individuality of complex historical happenings which some philosophers have held to stand in the way of a generalized social science. Apart from the questionable assumption herein implied that science can only deal with the general, it is sufficient to say with Professor Toynbee that a "given phenomenon may be unique and therefore incomparable in some respects, while at the same time in other respects it may be a member of a class, and therefore comparable with other members of that class in so far as it is covered by the classification".¹ That comparative study is not only a theoretical possibility is evidenced by its growing use in economic history, in the study of forms of government and of legal institutions in general, not to mention its frequent employment in anthropology.

If, at one extreme, people dispute the possibility of sociology on the ground that in the last resort human relations do not lend themselves to analysis by scientific methods, others deny its utility or necessity on the ground that human affairs have already been marked out for study by a large number of specialisms such as economics, politics, psychology, anthropology, and that no useful purpose can be served by a discipline which claims to survey the social field as a whole. The first reply to this objection is that the development of the specialisms has made the need for a general sociology all the more urgent.

¹ Cf. *A Study of History*, i. 178.

The specialist very naturally tends to give prominence to the factors of social life of which he has made close study. The student of politics tends to identify the State with the whole of society, the economic historian to see the economic factor everywhere, the biologist to stress the genetic and racial elements, the psycho-analyst to seek the solution of all human problems in the mysterious working of the unconscious. It is the duty of the sociologist to resist the tyrannous intellectual fashions of the day and to give due weight to each of the numerous factors which enter into the unity of social life. Consider, for example, the discussion of such a problem as the nature and conditions of war. Biologists have sought an explanation in the conception of the struggle for existence and natural selection; political historians dwell on dynastic ambitions and nationalist rivalries; the economic historian looks to the pressure of population, the desire for economic expansion and for the power to deflect the course of trade; the socialist historian points to the efforts made by governments to reduce domestic discord by diverting attention to external enmities; the psycho-analyst seeks to determine the predisposing conditions of war by an analysis of the factors which determine the balance of repressed and repressing forces in the human mind. A sociology of war must aim at a systematic study of the relations of these factors to each other, and must devise methods for estimating the force of the numerous variables involved. Thus, for example, comparative study of different types of society may throw light on the question whether aggressiveness is really a constant

element in human nature and to what extent it is moulded by changes in the economic structure or by variations in the early familial environment and modes of education. There are certainly wide variations among different peoples. Again, a sociological study of war would have to check the biological hypothesis by a general enquiry into the different types of expansion directed at discovering how far they result in genetic changes of the populations concerned, and how much weight is to be attached to acquired technique and training as compared with innate factors in determining success in war. The sociologist must also make it his business to get rid of blanket terms like "economic" and "political" causes of war which obscure and conceal numerous overlapping factors. He must take an all-round view of war as a social phenomenon, and though he cannot get far without the assistance of numerous specialisms, his work is different from theirs and a necessary complement to it.¹

Another example which may be useful in this connection is the treatment of population problems. These have usually been discussed by economists from the point of view of the pressure of population upon the means of subsistence, while demographers have dwelt on the statistical aspects of fertility, morbidity, and mortality. The sociologist looks at the facts connected with population not only as providing him with the data required for the establishment of a social morphology or classification of types of society, but also in relation to what might be

¹ Cf. for a beginning in this direction, Steinmetz, *Soziologie des Krieges*.

called social physiology. He is interested in the relations between the density of population and social differentiation, type of family and class structure, rate of cultural changes, social stability and instability. He is concerned not only with the quantitative aspects of population but also with the qualitative ones, and in particular with the bearings of changes in the distribution of inborn qualities upon social structure and function. In dealing with these problems experience shows that the exclusively geneticist approach is liable to lead to very one-sided conclusions, and that to be fruitful it has to be controlled by a sociological analysis and comparative study of social stratification. Similarly, it is easy to show that in the scientific treatment of such a phenomenon as crime the sociological point of view is essential if we are to estimate aright the part that is played by economic, innate mental and physical peculiarities, psycho-analytic mechanisms, the clash of moral standards arising from group contacts, and many other factors for each of which preponderant influence has been claimed by specialists. It is only by looking at crime as a reaction of the individual to the standards of his group and by an analysis of the forces governing group life that there is any chance of a balanced interpretation of criminality, and therefore of arriving at reliable methods of control. In sum, while the sociologist recognizes as clearly as anyone that for effective scientific work specialization is essential and inevitable, he yet claims that it is in the nature of social phenomena that in them physical, biological, and psychological factors are interwoven, and that these must be viewed in their

relations to each other in a comprehensive account of social life and social evolution.

In order to grasp more firmly¹ the relation of sociology to the special social sciences, it is necessary to refer to the principal tasks which modern sociology sets itself. Its first task is that of description and classification. It tries to sort out the different types of social aggregates or collectivities and of the institutions, that is the recognized or sanctioned modes of behaviour by which these aggregates regulate the relations of their constituent individuals or groups to each other. He distinguishes, for example, various types of kinship organization and of territorial groups like villages, towns, cities, nations, and states. He classifies them in various ways, but particularly on the basis of the degree of social differentiation and complexity of structure, and he discovers that though the number of social aggregates is much larger than appears at first sight, they tend to group themselves around certain types. He deals similarly with institutions like marriage and family, with the various forms of property, with distinctions of rank, with the numerous forms of associations between members of the same or of different communities. He may endeavour to classify not only societies but also civilizations, or what are sometimes called culture cycles, and enquire into their mutual relations.¹

From classification the sociologist insensibly and inevitably passes to an analysis of causal factors.

¹ An essay like that of Professor Toynbee, for example, who enumerates nineteen distinctive "societies", belongs to comparative sociology.

He tries to discover the forces which lead to the formation of groups and determine their cohesion, differentiation, and their relations to other groups. In this connection the relation of sociology to psychology may be illustrated. The psychologist points to certain elements in the human mind making for co-operation, rivalry, hostility. The sociologist is interested in describing how these relatively constant elements in human nature express themselves in varying social situations, in the part they play in shaping social life, but also in the converse influence of society and culture upon mentality. He is concerned not only with the constitution of human nature but with the moulding of it by social and historical forces, with the varying rôles played in human life by impulse and reason, and with the possibilities of a rational control of social change.

The sociologist is particularly concerned with the nature of group mentality, that is to say, the network of beliefs, mode of thought, feeling, and action by which the mutual relations of the members of the group and the relations of the group to the outside world are shaped. This group-mentality is, of course, conditioned by the nature of the constituent individual minds, but also by the structure of the group, that is by relations of which the individual may be unaware. In the economic sphere, for example, the course of the individual's behaviour is largely defined for him by a complicated structure of which he normally grasps only a tiny portion. His thinking and even his emotional life are governed by traditional patterns imposed by his group. How are these patterns themselves fashioned?

within what limits can they be deliberately changed ? how are they affected by the contacts between groups ?—these are the essential problems of social psychology. In view of the numerous agencies which now exist for the moulding of belief and opinion and the rapidity with which apparently even large groups can be induced to turn what they have hitherto regarded as good into evil and evil into good, the importance of these problems hardly needs to be emphasized.

It is not to be inferred that mental factors, even if we include impulse, emotion, and unconscious drives, are the only causal agencies in the life of society. Their precise rôle is one of the major problems of comparative sociology, but it is clear, even on a superficial survey of the facts, that social causation is extremely complex and that mental factors are themselves shaped by the social structure at least as much as they shape it. Men make their own history, but history also makes men. To resolve this paradox is the task of sociology, and for its fulfilment accurate methods are needed for estimating the comparative influence of the genetic and environmental agencies, and within the environmental for distinguishing the economic from other social factors, including those involved in science, art, morals, law, and religion.

A third part of sociology is concerned with problems of development, or rather with long-range trends in history. Are we to accept the view of such a historian as H. A. L. Fisher, who can discern in the part of history studied by him no plot, rhythm, or pattern, but only a series of emergencies, the

play of the contingent and unforeseen? Even if we accept the view that the sequence of events within each of the major civilizations or culture-areas can be brought under laws, are these laws specific to each culture-area, or are they part of a system of laws governing the whole of mankind? The philosophies of history which in the eighteenth and nineteenth centuries attempted to work out the phases through which mankind, regarded as a single whole, has passed are now largely discredited. Indeed, sociology may be conceived as having arisen largely by way of reaction against these ambitious schemes. The field of historical knowledge has since been enormously extended, and the philosophical historian now has to take into consideration civilizations of which the earlier thinkers knew but little. There is also an immense accumulation of facts in archaeology and anthropology relating to primitive peoples, past and present, which a hundred years ago was almost non-existent. The attempts which have been made recently by sociologists and sociologically-minded historians to systematize this vast body of data dispose of the notion of regular and unilinear development, and they certainly provide no warrant for the acceptance of any law of necessary and automatic progress. On the other hand, they do not justify the view that the history of the world is a succession of quite unrelated civilizations each with its own set of values not capable of being brought under a common denominator. They point, on the contrary, to the ever-present and increasing influence of contacts between the different groups of mankind, and gradu-

ally methods are being evolved in the various branches of social science, *e.g.* in archaeology, anthropology, linguistics, and economic history, for studying the different types of culture-contact. It must be admitted that the body of facts accumulated by the specialists is so vast that the systematic sociologist can only approach it with fear and trembling. Sociology still awaits its Newton or its Darwin. Yet the lesser mortals can do much to prepare the ground for the synthesis of social studies which is so urgent if the course of civilization is to be rationally directed.



DR. HAVELOCK ELLIS

CHAPTER XI

EROS IN CONTEMPORARY LIFE

To say that the social aspect towards sex has changed is a truism. At innumerable points we feel and think and act to-day, where some aspects of sex are concerned, differently from the people of fifty years ago whom we call "Victorians", though they were far from being conscious of the creed we are now pleased to attribute to them. For the younger generation the difference is not easy to realize. The mass of every generation—for we must put aside in any generation the minorities who are before their time and behind it—accept the way of life of their own day and cannot easily conceive any other.

Those of us who are old enough to have been in touch with more than one generation are better able to appreciate the changes which have taken place. If I speak for myself, I can say that in my early youth sex had on the surface no existence. In a happy home life it never came into question. There was no prudish repression ; there seemed nothing to repress. There was never a word of information or guidance, and seemingly no need for it. I recall, indeed, that once as a small boy poring over a phrenological chart in an old book I came upon an

area marked "Organ of Amativeness", and asked an old lady in the room (who had spent her earlier life as a teacher) what that meant. She put aside my innocent question as improper. I felt snubbed and never again asked anyone a similar question. But my curiosities became intensified. I might indeed say that I have spent much of my life trying to reach the answer to my own childish question, breaking through various barriers on the way. At school, a middle-class private school frequented by the sons of professional men, the atmosphere was much the same as at home. Of course sex was never approached, openly or privately, by any master, but among the boys themselves it never came up for discussion. Some might cherish a private attraction to a girl, but if such subjects were ever touched on, it was lightly and playfully. Of masturbation I never once heard. I sought in books to satisfy my desire for knowledge, and at an early stage discovered that babies are not born, as I had previously supposed, through the navel. But the further I extended my search among books the more deeply dissatisfied I became. They were all superficial, or goody-goody, or cranky, when not, as indeed frequently happened, mischievous. Even if I had been able to extend my investigation more widely among books, scientific or popular, I should have found no reason to modify my conclusion. Those were days when it was possible for manuals of physiology to be put out, even by eminent hands, with the reproductive system completely ignored, when the psychology of sex had no existence at all, and the art of love was only known as an improper and immoral subject once written

about by Ovid. I was still a youth when, now sixty years ago, I made the resolution that a main part of my work in life would be the exploration of this subject, so that it should never be necessary for the youth of succeeding generations to experience the difficulties I had experienced in obtaining enlightenment on a matter so vitally important.

There will never be any occasion for anyone to make such a resolution again. It is no longer the lack of literature on the subject of sex which we have occasion to lament, but more probably its excess. Books on sex are constantly being thrown out from the press, not in one country only, and piled up so rapidly that it is scarcely possible for anyone to estimate their varying quality, sometimes good, sometimes bad, often indifferent, or a mere repetition (usually without acknowledgment) of what had been said in previous books. Still, many of them are good, and we have cause to be thankful that by a reasonable amount of seeking they may be found, in spite of the obstacles often put in the way of seekers.

For while the literature of information and of guidance is much, it is not everything. Practice lingers behind theory. Books affect social life, but that life takes a course of its own, and we have to view it independently of such influences.

So viewed, there is still change to be noted. We commonly hold that it is a matter of sex taboos, and that there has been a revolutionary removal of taboos imposed by "Victorianism". That is a superficial and very incomplete statement of the matter. Moreover it is far from true that taboos

on sex manifestations are so recent, or that we deserve special credit for abolishing them. They have been formed and abolished as far back as our knowledge extends, and, without doubt, still further back in prehistoric days. Even among some supposedly "primitive" peoples of to-day there are, as among ourselves, indecent words which no respectable savage uses, and these, we may be sure, change from age to age. In English literature we may trace the changing conventions and taboos of speech where sex is concerned. Chaucer could use simple old English words, though, as he himself admits, he was rather worried over the protests of the "precious folk". In France, in the seventeenth century, we find the same hyper-refined *précieuses* dominating speech. Tallemant des Réaux regrets that the good simple old word *cul* could no longer be used in respectable society.

There is action and reaction in this matter, the imposition of taboos and their abolition. It was one of the few beneficial influences of the Great War that it aided in the removal of various sex taboos which would otherwise have taken place more slowly. A seemingly small yet highly significant example is the recognition of the word "syphilis" for the most serious of venereal diseases. Originally a poetic creation, the shepherd Syphilis, a more distinguished appellation for the vulgar popular name "pox", had with it fallen out of polite use, relegated to medical books, while the disease itself was left to fester in freedom beneath a respectable veil. Even the first rebels against this state of things only dared feebly to set up a

meek new tradition by talking of " Social Hygiene ". As though the whole hygiene of society could be comprised in a struggle with venereal disease! It was urgently necessary to face this social enemy and to name it if it were ever to be mastered. By a new and frank recognition of the evil this mastery is in all civilized countries now being, however slowly, achieved.

This social recognition of the word " syphilis " is, I may note, though highly important, only a special case of a general tendency in our social speech and even in our English literature on the side of art. Putting aside the daring products in the by-ways of literature which many would consider abnormal, such as the banned books of Henry Miller, even the recognized masters in English literature to-day exercise a new freedom. Thus Mr. Aldous Huxley's *Eyeless in Gaza*, which, so far as my limited knowledge goes, is perhaps the most significant English novel since the Great War, displays a freedom in using words and describing situations which the great novelists of half a century ago, a Meredith or a Hardy, would never have dared even to approach, though he is yet returning to the best traditions of English literature.

The specific fact of verbal freedom is part of a large generic group of facts, not only the normal but the abnormal facts, and not only the facts generally recognized as abnormal, but the supposed abnormal facts which also are really normal. We begin to face all the relations of sex in a more direct and less ashamed spirit. No doubt—and I am far from wishing to deny it—that spirit may be traced

back to the pioneering individual investigators who first explored this field and set forth the results in books. But as individuals their influence was small ; they were even liable to be legally suppressed. It was only when the results were transformed into socialized practice, into relatively generalized modes of feeling and acting, that they became effective. There were two notable features of this socialized development in the field of sex : it specially affected women and it tended, with minor qualifications, to pass beyond any national frontiers, at all events to the so-called democratic countries, for in authoritarian lands, where social habits are under direct State control, trends may diverge in different directions.

It was inevitable that the sexual status of women should specially tend to be modified, since it was around women that the old system was built up. The ancient and at its origin exclusively masculine quality of " virtue " has been quaintly transformed into an exclusively feminine and sexual quality. Not only moral laws but also social conventions had been elaborately and rigidly constructed around this absurdly disguised " virtue ". No doubt there were superficial national degrees in the rigidity of convention, and I recall that when in early years my sister crossed the Channel to join me for a time at the Paris hotel where I was living with a friend, Remy de Gourmont remarked that that would be impossible for a French girl. But beneath superficial national variations the underlying attitude was the same. To-day English women, including those of high character and ability, frequently exercise a

degree of freedom which could never have even seemed possible to my own early contemporaries. Those to-day who refrain from exercising such freedom, and they remain numerous, do so in large part deliberately and not because they feel that they are helplessly fettered by convention.

This socialized wave of sexual change especially affects internationally, though always with slight differences, Great Britain and the United States. But the same movements are reaching even the conservative countries of Latin tradition. Thus, as I only learn to-day, a great change is now taking place in Argentina as regards the social position of women, which hitherto has followed the restricted rules handed down from the days of Spanish domination. The new influence has been exerted mainly by the screen, for the cinema is in Argentina an immensely popular institution. Hollywood thus becomes, involuntarily and undeservedly, the missionary of a new social order.

But it is enough here to assume a general tendency to resemblance in Great Britain and the United States. Not long since Dr. Ira Wile, in the valuable *Journal of Social Hygiene*, set down his impressions, as an experienced observer during many years, of the generation of to-day. He recognizes the importance of the new growth of knowledge, the consequent dissemination of information concerning the manifestations of sex, and the breaking down of old taboos and mysteries. There is no longer any absolute morality; questions arise which never arose before, even though satisfactory answers are not always found. The most profound change is

that which affects the sexual status of women. They have developed into human beings in general respects on the same level as men, and this has inevitably led to a new attitude towards the former masculinization of all sexual ideas. They have their own ideas concerning sex and comradeship, and do not hesitate to contemplate a companionate marriage. They are conscious of being on a higher educational level, and able to formulate their own rights and privileges. If the new standard of morality involves freedom of sexual expression, that freedom holds equally for girls. This tendency may sometimes be pushed to extremes which even on the masculine side are generally regarded as undesirable. But while, for instance, petting with its freedoms has increased, and mutual handling is no longer supposed to be unholy and unclean, we have no good grounds for believing that greater evils are produced than were formerly liable to occur. There is a new liberation of the female spirit to-day, and a new feminine aggressiveness, but the accompanying greater awareness involves an increased power of self-protection, whether on the technical side with contraceptive arts or on the mental side with the realization of tensions and repressions and their significance. Venereal disease diminishes, houses of prostitution lose their appeal, and if intimate private liaisons are formed they are on the footing of mutual interest and even with reference to a monogamic basis. The tendency to promiscuity is dying out except in special small circles. The practice of masturbation is indeed sometimes thought to have increased, but the most careful of earlier

statistics show that it has always been very common. It is simply that now, being based on a regulated release of emotional tension, it need no longer be viewed as a secret vice. On the whole, it is doubtful whether the total amount of sexual activity has been increased. But it has been placed on a sound foundation and become incomparably more wholesome.

I have in the main been following Dr. Wile's diagnosis of the situation to-day in America. But it fairly represents what is happening in England and must happen everywhere as an enlightened outlook spreads. The conclusion which Dr. G. V. Hamilton reached, on the basis of his investigation of high-class married people, that men are becoming more chaste and women less chaste, is doubtless of general application, and, in relation to former conditions, it is a wholesome tendency. No doubt this enlightenment takes on forms that are sometimes crude and extravagant, and even mischievous. Those of an older generation who hear that "woman now smokes, drinks, travels alone, swears, gambles, swaps colourful stories, and imitates old Adam", do not always feel that that is evidence of a better world, but are apt to remember that there are natural differences in the sexes, physical and presumably psychic, which involve natural differences in tastes, and that the "old Adam" is not always a worthy object for imitation. But it is inevitable that in periods of transition reactions should sometimes be extreme. They do not lead us to expect any fundamental change in those standard forms of marriage which have always prevailed in our world. I am in entire agreement with the conclusion of Dr. Wester-

marck in his recent judicial work, *The Future of Marriage*, on this point, and that what we may reasonably expect is that "people will be less tied by conventional rules and more willing to judge each case on its merits, and that they will recognize greater freedom for men and women to mould their own amatory life".

One such extreme reaction is that from the old attitude of secretive mystery surrounding a terrifying and disgusting impulse to the assertion that we are merely concerned with a commonplace animal function. Thus some teach that the sexual function should be treated as on the same level as the excretory functions. It is enough, we are told, to ask: Is it natural? and to accept what is regarded as the obvious answer. Now, it is very desirable that from the earliest age the child should be taught that there is nothing disgusting or shameful in excretory functions, even though customary to regard them as private. This is important on account of the close proximity of the excretory centres to the genital centre. If the excretory organs are viewed as low, despicable, and dirty, the same view will only too easily be extended to the genital centre they are so closely associated with.

But the question is not settled by saying that excretory functions and sexual functions are both alike physiological and natural. There are essential respects in which they profoundly differ. Physiological functions in general work independently of any outside individual. A Robinson Crusoe may fulfil in a completely normal manner any physiological function save only that of sex. To

fulfil in a normal manner the function of sex the co-operation of another individual is needed. Moreover that co-operation has to be of a peculiarly private and intimate nature since it involves the penetration of the body. There is still a further character of the first importance which marks off the function of sex. It not only concerns another living person ; it concerns, when completely fulfilled, the generations yet unborn to whom it will give life. In the sexual act two persons achieve that supreme creative act which mankind has commonly ascribed to deity ; we can scarcely say as much for the act of excretion, however admirable it may be.

We do not know exactly how primitive peoples reached that attitude of awe before the function of sex, of mixed horror and fascination, which we nearly everywhere find in savage cultures. But we may see good reason why they should regard it as constituting a sphere remote from ordinary physiological functions. And the attitude is so widespread that we may fairly consider it much more " natural " than that of matter-of-fact commonplace acceptance.

On how genuinely natural a basis the primitive blended horror and fascination of sex rests we see in the animal world. Sex tends to be difficult among animals. It arouses resistance as well as attraction. Thence arise all the prolonged elaborations of courtship with its artistic transformations into song and display. Biologically, the easy functioning of sex can scarcely be termed " natural ".

When we realize that, alike for early and savage men and for the lower animals, the sexual function

is a point at which attraction and repulsion meet, we may be the less surprised at the opposing attitudes we find in civilization, even among our would-be intellectual leaders, championing opposite doctrines. There is, for instance, among the most recent philosophers of sex, the late Dr. J. D. Unwin, who in his *Sex and Culture* elaborately argued that the amount of civilized energy stored up in a society is related to the degree it has attained in compulsorily sacrificing the gratification of desire. Dr. Brend, discussing this very same subject of Sex and Civilization in his recent and remarkable book *Sacrifice to Attis*, reaches what may fairly be considered an exactly opposite conclusion. His points are often plausible, though they are all on one side and might lead the reader to suppose that there is an abrupt break between the cultures of savagery and the cultures of civilization, the first "natural" and the others not. On the one hand there is H. G. Wells, in his *Experiment in Autobiography*, stating "my impulses were all to get rid of the repressions of sexual love", on the other hand is Professor Knight Dunlap, in his *Old and New Viewpoints in Psychology*, declaring, "Actual repression is the only salvation of Man if civilization is to continue".

On this most intimately vital of subjects, we see the opposition is complete even among highly intellectual people. Yet, biologically, they are both right. They are merely suffering from that affliction so common even among philosophers, an inability to see more than half of a question. Repression and expression are both essential. They exist throughout Nature. Even in plants they are

plain to see. While as to savage societies, and as Malinowski emphasizes, "Sexual repression is as rigid and definite as sexual licence is clear and prescriptive." And the repression is the necessary condition for the effective manifestation of the expression, the one is as "natural" as the other. It is under pressure that the finest growth takes place. Look at birds, whose life to the superficial observer is so free and untrammelled. Yet, as careful observation shows, they are constantly manifesting inhibitions, and their existence is a perpetual discipline in self-control. Human life is simply the same process of self-discipline in more complex phases, resulting in the same rhythmic play of repression and expression. The arch of life is built up by the balance of opposing forces.

If we accept the general pattern of the world, we have also to accept, since we are dealing with a balance that is vital and in constant change, a perpetual readjustment of the opposition. That perpetual readjustment is specially demanded at the point of sex because it is precisely at that point that the opposing forces of expression and repression are most acutely in conflict. It cannot be avoided, for, as Freud says in his always suggestive *Lectures on Psycho-analysis*, even "free living" is itself a repression of the opposing force. The conflict is well illustrated by the everlasting difficulty of marriage, which is the social centre of sex. Marriage may properly be regarded as normally a state of tension (indeed, as Keyserling remarks in this connection, without tightened strings there is no music), and there is no prospect of the abolition of

marriage. It exists, in one form or another, among the lowest races, and at the other end the most advanced communities we know have not superseded it. Yet marriage has always been difficult. It perpetually involves trouble and injustice among savages. It does the same among ourselves. In the middle of the seventeenth century Dorothy Osborne wrote that it was a miracle if two couples in ten lived in agreement. To-day it is said that not more than one marriage in four is happy, while even that is sometimes regarded as an optimistic estimate. What can we do about it ?

In common with many who have played a pioneering part in sex enlightenment, I have usually said that there is first of all one chief remedy : education. I say so still, but I recognize that there is much room for criticism of that answer. In the first place we may ask who is to impart the education. It is the mother whom I regard as the first and most influential guide to her child from the earliest age in matters of sex. But the vast body of mothers to-day are still so embarrassed by their own early initiation, or lack of initiation, into sex knowledge that they feel unable to say anything to their own children. It is useless to turn from the mothers to the elementary school teachers. These are for a large part young women working under a State educational system which has never so much as heard of sex enlightenment as a vital need in education, and they have been brought up in a cloistered concentration on intellectual school subjects which has often even suppressed or deflected their own sex impulses. Exceptions there are

nowadays, but these run the risk of being squashed by their official superiors if they play the part in education which they consider right and necessary. The way out of the difficulty which has suggested itself is the establishment, with or without State or official aid, of special methods of sex education at the later school age, which may often be too late. This course has of recent years been vigorously pursued in America. "Complete sex education for our children is an absolute necessity", says Judge Jeanette Brill of the City Magistrates' Court of New York: "Parents have been given a fair trial, and have, for the most part, failed utterly", with the result, she adds, that the tragic victims of sex ignorance, quite ordinary boys and girls, are brought into the Adolescent Court nearly every day. She finds the only hope in the schools, in every high school a male or female physician on the staff entrusted with this delicate and intimate task, and she states that in Philadelphia, where a year's course of sex enlightenment—there termed "health education"—is compulsory, it has had remarkably good results. A large number of schools, colleges, and other institutions in the United States have set up various kinds of courses for sex education, while in Canada, early in the century, the Government initiated the method of sending round to schools lecturers on this subject, though but little progress seems since to have been made. In England, in spite of efforts here and there, the progress has been even less. At the best it has to be admitted that we are in the presence of a vicious circle which it is difficult for this method of education to break.

The New York *Journal of Social Hygiene*, which is the chief organ for all movements of this kind, has set forth "Points for Parents to Remember", and the most vital of these is the last: "Do you realize that, however useful talks from teachers or books written by experts be, your child's attitude to sex will be based on your own?" But if the child's attitude is determined by the ignorant attitude of the parents, and the parents' attitude by the ignorant attitude of their own parents, the vicious circle is complete.

Fortunately that circle is here and there to-day broken. I find, and in various parts of the world, what I call the "New Mother". Quite often she has been formed by the realization of what was evil in her own early upbringing. Lately a schoolboy correspondent (aged fifteen) near London wrote to me: "I was brought up perhaps a little unusually, a fact for which I have ever been thankful. My mother wished me to think things out entirely for myself. She never made any mystery to me about sex, so that I looked upon it as a perfectly natural function, instead of only learning about it at a later age and having to see it through a haze of mystery and bigotry. I was brought up to no particular religion, and any question I asked my mother she answered as best she could, or frankly admitted she didn't know and helped me to look it up somewhere. I feel that it is such a pity more parents do not act in that way." That mother was evidently one of my "New Mothers", and a chief hope for the world lies in their multiplication. Dr. G. V. Hamilton, investigating married men

and women above the average in education and culture, speaks of the "terrible mothers", of the mother who tells a girl from infancy on that her father is an unworthy or inferior person, and the mother who unwittingly tries to find in her son the satisfaction of a love-hunger her inhibitions will not permit her to seek in her husband. Hamilton is compelled to add: "This girl's name is legion, and so is the boy's". It is such parents who are responsible for the complexes we so often hear about. But, as Adler has recently remarked, "no child brought up under normal and harmonious conditions will develop into an Oedipus or an Electra". The children brought up under morbid or stultifying impulses become unable, even when they have reached adult age, to think and act for themselves. An adult correspondent, this time American, writes just now: "Here are thousands, even millions, of marriageable young people who, from unemployment or low income, find it impossible to marry. What, I would like to ask you, is the best course for such to follow?" No single answer can be given to such a question. But we ought to be able to feel that young people, sensibly brought up and living in a sympathetic social environment, can think out a decision for themselves and act accordingly.

That "social environment" and its education cannot be left out of account. That is why the problem is so wide and any progress necessarily slow. It is not merely on individuals, but on our traditions, that we have to work. At the present time the traditions, even of the most learned

professions, are in the matter of sex absolutely incoherent and absurd. That is well seen, and far too frequently, in the law courts. Here the sex impulse, under the garment of marriage, is held up as sacred ; without that artificial garment it is disgusting. " The book deals ", said the Attorney-General in court not long ago, " with what everybody will recognize as an unsavoury subject—gratification of sexual desire." He failed to explain how what is " unsavoury " can afford " gratification ", nor did he drive in his argument logically to the hilt by declaring that " everybody " regards marriage as " unsavoury " and that whatever is " unsavoury " is illegal. And the judge not only accepted this chaotic mental attitude without question but pronounced sentence in accordance with it. There is indeed an immense scope for education in this sphere. When we think of it, we may well smile at our facile enthusiasts for more education. For this is an education which must be begun at the knees of mothers and in family life, and be carried on not only in schools and colleges but in the consulting-rooms of doctors and the pulpits of preachers, and by no means least on the judicial bench.

We cannot, indeed, assert that the difficulties surrounding the sexual impulse are merely social and to be removed by even the most extensive social change. They are ultimately, in the wide sense, biological, that is to say, anatomical, physiological, biochemical, and psychological. But we have to learn to avoid rendering the natural difficulties insuperable by maintaining rigid, out-worn, and antipathetic social conditions.



PROFESSOR B. MALINOWSKI

CHAPTER XII

ANTHROPOLOGY AS THE BASIS OF SOCIAL SCIENCE¹

I

DETERMINISM OF THE CULTURE PROCESS AND THE SUBJECTIVE APPROACH

THAT we are passing through a cultural crisis of unprecedented magnitude and of a definitely putrid quality nobody doubts, except, of course, the 999 in 1000 intellectual ostriches who prefer to remain head in sand rather than to face realities. There are also those who react with complete defeatism; who are satisfied with nihilistic prophecies of decay and downfall. Oswald Spengler has made himself the most popular and decorative spokesman of this group.

But there are still a few left who prefer to stand for intellectual integrity, and fight even if victory be uncertain. These can see only one way out of the straits—the establishment of a rational and empirical, that is, scientific, control of human affairs. This is the faith of those united in the present

¹ This paper is substantially identical with the paper "Culture as a Determinant of Behavior", delivered on September 7, 1936, at the Harvard Tercentenary Conference of Arts and Sciences. Copyright by the President and Fellows of Harvard College.

intellectual venture ; it is the aim and thesis of this volume.

In this chapter I attempt to show that cultural anthropology can and must provide the foundations of the social sciences. It can do this by defining the nature of human associations, of economic pursuits, legal institutions, magical and religious practices, studied within the widest range accessible to observation and analysis. In order to do this, it is necessary to re-define the aims and scope of cultural anthropology. This science is, in fact, at present detaching itself more and more from the agreeable and fascinating hunt for the exotic, the savage, and the diversified. As a science, it has to concentrate more and more on the universally human and fundamental, even when this lacks the touch of sensationalism and remains as dull and drab as the daily life of man and woman, as their quest for food, and their concern with children and cattle.

The science of man is still conceived by laymen as a colourful display of strange oddities and quiddities of the savage ; as the antiquarian search for origins, survivals, and evolutionary side-tracks. Why is a cannibal so cannibalistic ? Why does he avoid his mother-in-law with so many circumstantial rudenesses ? Why does he kill one twin or even two, while we worship quads and quins ? Head-hunting, juicy stories about orgiastic ritual, somewhat shocking forms of primitive marriage, obscene mutilations, and mysterious masked dances are undoubtedly more amusing to speak about or even to listen to than economics, law, and social organization. But scientifically these latter are more relevant.

There is no doubt that in the vast museum of human achievement—or failure—in progress there can be found strange hypertrophies, unique distortions, and quaint deviations from the human average. These, however, are but the plums or currants in the pudding of each culture. Take the most primitive or most exotic of human civilizations, and you will find there still the same ordinary universally human standardized institutions: the domestic hearth round which there live, work, love, and hate each other the members of the family; the co-operative group, which goes out to dig roots and search for edible grubs, who till the soil or do the hunting; or, again, the congregation of the faithful who worship a totem or a supreme being, an ancestral spirit or a fetish. For all human beings must be nourished, and they have to reproduce; they must co-operate in technical and economic pursuits; they have to obey rules of conduct, and these have to be enforced in one way or another. They must live, love, and be safe, even before they dance, paint, enact strange ceremonies, and develop sacred or profane fiction. Even in these later pursuits, however, the fears, hopes, and desires of man are not arbitrary, hence not indefinitely or indeterminately diverse.

The search for determinism in the broadest and most fundamental principles of human behaviour is, therefore, the first and foremost scientific task of anthropology conceived as basis and starting-point of other social studies. But even in the case of very strange and outlandish customs or institutions, explanation can only mean the reduction of the exotic

and singular to elements universally human and familiar. Consider, for instance, head-hunting, or the *potlatch*, running amok, or lying in *couvade*. What can be meant by explaining these in a scientific analysis? Only when we begin to perceive that at the basis of a strange, at first incomprehensible, custom or institution there exist fundamental human tendencies or influences of environment; when we see how that one strange custom depends on and is related to certain pursuits which are universal and, therefore, immediately comprehensible—then, and then only, can we say that we understand the custom.

The *couvade*, for instance, is brought nearer to our comprehension if we consider it as a very strong expression of the physiological claims of paternity, and of the tendency—universal, though usually less marked—for the father to assimilate his rôle to that of his wife. The *potlatch*, again, is but a highly-magnified collective gesture of grandiloquent generosity or conspicuous waste, of which we find symptoms and manifestations in every culture, less obvious, no doubt, and less pointed, but unmistakably akin to the great feasts of the North-West Indians.

Having lived from childhood in a variety of cultural settings—among the then semi-savage Carpathian mountaineers, and among Baltic barons, having moved from Poland to North Africa and from the Canary Islands to north Germany and France—and later having worked among several exotic cultures, I have more than once experienced the reduction of the exotic to the familiar. When

you enter a new cultural setting, the behaviour, individual or collective, of the new type of human beings seems strange, unmotivated, irrational, in short incomprehensible. You learn the language, you gradually adopt the strange habits and the new points of view—and imperceptibly what was alien becomes familiar and you feel at home in what recently had been an exotic *milieu*. The universally human running through all the cultures is the common measure of comprehension and adaptation.

With all this, there are no doubt certain queer and extremely exotic habits which will always remain unamenable to explanation, hence quaint and almost repugnant. Even now I cannot understand—indeed I feel a strong repulsion at the very thought of it—how certain human beings can enjoy playing golf, or committing suicide by *hara-kiri*; how some natives are able to remain for long stretches of time standing in the rain and looking at a few others kick a large round object (this is called among the natives of England “football”); or why some South Sea natives must collect pickled heads, etc. etc. Even in such cases, however, as eating of human flesh, underdone beef, or plum pudding, playing golf, running amok, and the practice of *cowwade*, the anthropologist may attempt to survey the psychological raw material of the pursuit, can assume a certain diversity of taste in human beings, and define the pursuit in terms of the universally human.

But it must be clear to anyone with training in natural science or a scientific outlook in cultural matters that the less fundamental a phenomenon, the more complex and concrete the factors which

enter into its make-up, the lesser will be the chance of its ever becoming the subject of a general law, the result of universally valid principles. Science begins and ends with the establishment of general principles valid for all the phenomena which fall within its purview. The science of human behaviour, that is, of culture, is not an exception to this rule.

One of the greatest virtues of a scientific worker consists in knowing precisely where to draw the limits of legitimate research ; it consists in possessing the courage of a clear and emphatic *ignoramus, ignorabimus*. The humanist has perhaps not yet clearly recognized the beauty of this virtue. He has not drawn strongly enough the line dividing art, intuition, and empathy from scientific research. To a humanist both qualities are necessary ; they may be combined ; they should never be confounded. Just now when we are faced with the danger of a complete breakdown of the scientific approach and of faith in science, combined with a corroding pessimism as to the value of reason in dealing with human affairs, the power of reason must be affirmed and its functions clearly defined. It is not an accident that Spengler's nihilism and defeatism is founded on an entirely anti-deterministic, hence anti-scientific, conception of culture. To Spengler, "Culture" is an autonomous group-mind or collective genius which expresses its free will in those outward shadowy manifestations which, to the uninitiated and unwary, appear as the substance. The Eye of the Illuminated Seer and Prophet alone perceives that they are but the outer husk, and pene-

trates beyond to the inner meaning. This grandiose and mystical conception of culture as a Spirit-behind-the-facts has fascinated millions and stultified the work of social science for a generation or two.

The jack-in-the-box conception of culture, as the self-revelation of an immanent Genius or Deity, has been cultivated in German metaphysics ; it reaches its peak in Hegel's Historical Idealism. But its full practical application had to wait till the arrival of the latest incarnation of the Absolute—Herr Adolf Hitler.

The conception lends itself not only to a mood of pessimism, but also to an aggressive, strong-fisted, and somewhat egocentric *Wille zur Macht*. It has become the spiritual charter of National Socialism and Fascism, and also (let us be fair) of Communist dictatorships-in-culture. For every dictatorship can make good use of a doctrine which regards all civilization not as the expression of the needs, desires, and fundamental characteristics of the many, but rather as the dictated will of one. No dictatorship can tolerate more than one standard or arbiter of ultimate wisdom and value. It must be truth or Hitler, scientific determinism or Stalin, results of research or Mussolini. Whether you accept doctrinaire Marxism as the ultimate answer to all questions, or the view that one "racial" or "national genius" alone has produced THE civilization (and goes on producing it in the dictates and *pronunciamentos* of a Ministry of Propaganda and Kultur), there is no room for free, uninspired, and untrammelled research into the determinism of

historical process, the limits of legitimate legislation, the ethics of oppression, and arbitrary moulding of human character and spirit.

On the negative side, therefore, the following survey of fact and argument is directed largely against the gigantic abuses, theoretical and practical, of the Hegelian principle that civilization is but the dictate of an Immanent Genius or the Incarnation of the Absolute. These doctrines, as a matter of fact, are not confined merely to propaganda ministries or to such productions as *Mein Kampf*, the speeches of Mussolini, and the decrees of the Kremlin. From quarters above all suspicion of sympathy with dictatorship there have come quite recently pronouncements strangely in tune with the anti-deterministic view of culture — anthropological theories declaring that there can be no genuine science of culture.

Listen to the venerable leader and veteran of American anthropology, Professor Franz Boas. In an apparently definite statement of his position which is also his *imprimatur* on a strange book by Dr. Ruth Benedict,¹ he tells us that the ultimate task of the anthropologist consists in "a deep penetration into the genius of the culture". He follows this up by telling us that in a survey of diverse cultures we find that "they are permeated each by one dominating idea". But whose idea is it by which a culture is dominated? No doubt the idea of the "genius of the culture". We are dangerously near to the conception of *Volksgeist* or *Volksseele*, the immaculate tribal genius of the German people, with the

¹ *Patterns of Culture*, 1935.

Jewish grandmother strictly ruled out. For it is the preservation of the purity of race and of its cultural genius on which the modern prophets of the Third Reich are building a "pure culture".

Professor Boas's attitude towards Hitlerism is exactly the same as mine, and his own work in Anthropology is classically scientific. Yet in a moment of methodological absent-mindedness he seems to forget that the only salvation for social science is to become a real science, that is, to part company with "tribal geniuses", "pervading spirits of culture", and all such hypostases which are merely a short cut away from the legitimate task—a search for general laws. Indeed he tells us that "the relations between different aspects of culture follow the most diverse patterns and do not lend themselves profitably to generalizations". No generalizations, no universally valid laws, no science of culture. I have also to disagree fundamentally with Professor Boas when he light-heartedly defines other cultures as "abnormal": in stating that the more we know of cultural drives, "the more we shall find that certain controls of emotion, certain ideals of conduct, prevail that account for what seem to us as abnormal attitudes when viewed from the standpoint of our own civilization. The relativity of what is considered social or asocial, normal or abnormal, is seen in a new light."¹

In my opinion this is not the right way to put anthropology on a scientific basis. The apparently most heterogeneous diversities must be reduced to common factors, for there is a common measure of

¹ *Op. cit.* pp. xii and xiii.

all culture process and culture configuration. To deny this, as is done by Dr. Ruth Benedict in her book sponsored by Professor Boas, is to condemn the quest of scientific anthropology from the very beginning. In a comparative examination of several cultures she affirms that they are "heterogeneous assortments of acts and beliefs". She tells us that "they differ from one another not only because one trait is present here and absent there, and because another trait is found in two regions in two different forms. They differ still more because they are orientated as wholes in different directions. They are travelling along different roads in pursuit of different ends, and these ends and these means in one society cannot be judged in terms of those of another society, because essentially they are incommensurable."¹

The anthropologist, therefore, has to take his staff and walk with one "tribal genius" to its ultimate goal and discuss with this "tribal genius" the ends and aims of its pilgrimage. By some miraculous and prophetic intuition the anthropologist has to apprehend each orientation as a specific, incomparable reality.

The results carried out on this programme of genius-hunting and empathy with collective spirits are what might be expected. After long and laborious analyses, we are told by Dr. Ruth Benedict that one culture is Apollonian, the other Dionysiac, that one tribal genius suffers from megalomania, and another from paranoia. There are cultures which are "incorrigibly mild", others "ruthlessly

¹ *Op. cit.* p. 223.

aggressive", yet others "superbly self-satisfied". I could quote from other writers who affirm that culture can only be understood as a form of "collective hysteria", while others speak about "masculine cultures" or cultures "oriented away from the self", about races who are "introvert" or "extrovert", or define a culture as "maternal in its parental aspects and feminine in its sexual aspects".

All such theories reduce Anthropology to a purely subjective interpretation of each culture in terms of figurative speech, of pathological simile, of mythological parallel, and other more or less literary or artistic ways of intuition. There is no room left for the scientific analysis.

I had to enter the protest with some emphasis, because the new tendency threatens to dominate the growing generation of anthropologists both in the United States and in this country. Livelier journalism has already hailed Dr. Ruth Benedict and her associates as the prophets of a new vision in humanism. The tendency is so facile and attractive, yet so entirely sterile in my opinion, that no warning could be too strong. Many of the younger generation are drifting into mystical pronouncements, avoiding the difficult and painstaking search for principles; they are cultivating rapid cursory field-work, and developing their impressionistic results into brilliantly dramatized film effects, such as the New Guinea pictures of Dr. Margaret Mead in her *Sex and Temperament* (1935).

There is diversity in human culture, thank heaven! Empathy into "national characteristics" or "racial genius" is an attractive artistic pursuit.

HUMAN AFFAIRS

Oh, East is East, and West is West, and never the twain shall
meet,
Till Earth and Sky stand presently at God's great Judgment
Seat. . . .

But even when it comes to art, continue to read Kipling's poem and you will find that when it is a question of a relevant pursuit such as horse-stealing or cattle-lifting, robbery or war, then East meets West on an equal footing. The story of *Kim*, and the Anglo-Indian short stories, where East comes to grips with West and the two vie with each other in love and hate, in fights and adventures, all demonstrate one truth—the poet and anthropologist Kipling always divines the common measure of humanity-at-one. The artistic creation of *Kim* alone shows the road to the correct treatment of empathy and intuition, for *Kim* is both a Westerner and an Indian, and in all his exploits he moves along the line of common measure.

The private, personal drive of every anthropologist is often to be found in his love of the exotic, in his insatiable hunger for the taste of strange customs and picturesque costumes, for the flavour of new tongues and the new language of ideas and emotions. But from the very fact that a European can sometimes assume the outlook and temporarily even adopt the ways of a stone-age Melanesian or an African nomad, an Indian or a Chinaman, proves that there is a common measure in even the intuitive aspects of culture. And when it comes to scientific analysis, it is necessary to lay the rule hard and fast, absolute and rigid, that to go beyond the search for the common measure is to flounder into

the non-scientific. The artist may be there too, in the make-up of a field-worker, or of an anthropological theorist, but he must not confuse his aesthetic task with his scientific problems.

On the positive side, therefore, the arguments which follow are an attempt to establish that there can be a genuine science of culture; that general principles and universally valid concepts are not only necessary, but indispensable; and that the analysis of human cultures can be carried out in the same spirit—both empirical and strictly conforming to logic—which is the only way of dealing with problems of physics, biology, and anthropology as well. Man differs from the animals in that he has to rely on an artificially fashioned environment: on implements, weapons, dwellings, and man-made means of transport. To produce and to manage this body of artifacts and commodities, he requires knowledge and technique. He depends on the help of his fellow-beings. This means that he has to live in organized, well-ordered communities. Of all the animals he alone merits the tripartite title of *Homo faber*, *Zoon politikon*, *Homo sapiens*.

All this artificial equipment of man, material, spiritual, and social, we call technically culture. It is a large-scale moulding matrix; a gigantic conditioning apparatus. In each generation it produces its type of individual. In each generation it is in turn reshaped by its carriers.

Is this big entity itself subject to laws of a scientific character? I for one have no hesitation in answering this question in the affirmative. Culture is a determinant of human behaviour, and culture

as a dynamic reality is also subject to determinism. There exist scientific laws of culture.

The possibility of a really scientific approach to humanism and anthropology is, as we have seen, still contested. It is not superfluous, therefore, to reaffirm the existence of determinism in the study of human culture.

In my opinion the principal ailment of all humanism is the disjunction of empirical approach from theory, of methods of observation from speculative doctrine. It will be best, therefore, first to turn to the testimony of cultural fact itself. It is easiest to grasp the essence of a phenomenon in contemplating its manifestations through a wide range of variation. Let us, then, make a rapid flight over the globe and obtain bird's-eye views of some highly divergent types of human culture.¹

II

THE CULTURE OF A NOMAD TRIBE

Let us descend first on the arid and dusty steppes of central East Africa inhabited by the Masai, the famous fierce warriors of the region. On approaching the native encampment, we are met by a group of men, tall, dignified, armed with iron spears and

¹ In the brief sketches of individual cultures which follow I am speaking from personal field-work in Melanesia and summarizing some of my impressions of the Masai and Chagga, whom I visited for a short time each. But of course the substance of what I have to say about them comes from the works of Merker and Hollis and Gutmann and Dundas, and also from information given by Mr. Kenyatta, himself a Kikuyu with Masai blood, and by Dr. Otto Raum, born and brought up among the Chagga.

daggers. Their women, svelte and elegant, startle the newcomer with the glitter and rattle of the wrought-iron ornaments encircling their necks, wrists, and ankles. Both sexes still wear the native robes of soft goat- or sheep-skin. Not a shred of calico or European trinket mars the archaic vision of men and women of Africa as they lead us into the ring of low brown huts, made of thatch, plastered with cow-dung, and enclosed with a stout fence of prickly shrub.

Conservative in his material culture, the Masai still clings also to his old tribal ways. He still remains at heart a gentleman robber, herdsman, cattle-lifter, and warrior. When, after years of drought, starvation threatens the Masai among their pestilence-stricken herds, how can they help using force, in which they have been trained through generations, against their fat and flabby neighbours grown weak in their wealth and security? Their whole social organization—age-grades, mutilations and tests of endurance, and military drill—is tuned up to the development of warlike virtues. The Masai warrior—that is, every man between puberty and marriage—lives in a special camp, devoting all his time to the aristocratic arts of doing nothing and preparing for war. He is governed by a democratic régime in which an elected captain administers law and leads the men into battle.

Agriculture they despise, vegetables being food fit only for women. As a Masai warrior put it to me in a convincing argument: "The earth is our mother. She gives us all the milk we need and feeds our cattle. It is wrong to cut or scratch her body"

the slopes of the Kilimanjaro, the highest mountain in Africa, live the Chagga, an agricultural sedentary people. The Chagga, though he also keeps and appreciates cattle, is mainly a tiller of the soil. Yams and pumpkins, peas and millet, thrive well on the fertile green fields of the Kilimanjaro. The staple food, however, is the banana. As the Masai culture has been labelled "cattle-complex", so the Chagga culture could certainly be defined as a banana obsession. The Chagga lives on bananas; he lives among bananas—every homestead must be surrounded by its banana grove; and when he is dead, he is buried amid bananas.

In contrast to the nomadic Masai, the Chagga have a highly developed body of land laws. Their large-scale system of irrigation is a feat of engineering unparalleled anywhere in native Africa south of the Sahara. Again, unlike the democratic Masai, the Chagga have a well-developed chieftainship. In each district the chief is the supreme judge, the source of law, the military leader, and the high priest of tribal ancestor-worship. The centralized power of the Chagga, however, is not based on aggressive militarism. They have a highly developed system of defence, with extensive well-guarded earthworks along the frontiers, and enormous subterranean chambers where men, women, and cattle are able to take refuge during a Masai raid.

The Chagga differ from their neighbours, the Masai: they practise agriculture, live in fixed settlements, have a developed system of land tenure; and their religion consists mainly in ancestor-wor-

ship. They resemble the Masai in that they practise female circumcision, they have developed age-grades, and they believe in magic by divination. What is the best way of establish a commoning measure for the scientific comparison of differences and also of similarities ?

Clearly, again, we must compare their institutions—that is, the organized systems of activities, each correlated with a fundamental need. In both tribes we find that to nutrition there corresponds the economic system, dominated among the Chagga by agriculture, among the Masai by cattle-breeding. In both cultures we should have to analyse the economic system by means of such universally valid concepts as the organization of production, the methods of distribution, and the manner in which consumption integrates certain groups of people. Among both we should have to consider the physiological process of reproduction as it is organized into the domestic institutions. The physiological growth of the individual is in both cases institutionalized into the system of age-grades. Political organization comes into being in the satisfaction of the need for safety in the case of the Chagga ; in the case of the Masai the military organization and the political system are the outcome of a periodic need for predatory economics. In both tribes there are, again, corresponding organizations for the maintenance of internal law and order. The political system, in its military and legal aspects alike, imposes its own discipline, morale, ideals, and economic requirements.

The transmission of the cultural heritage from

one generation to another brings into being the two educational systems of the Chagga and Masai. In both tribes the earlier stages of training are bound up with domestic life, while later on the initiations into age-grades carry on the education in tribal custom and morality.

From the comparison of the two cultures we reach one of our pivotal generalizations. Every culture must be analysed into the following aspects : economics, politics, the mechanism of law and custom, education, magic and religion, recreation, traditional knowledge, technology, and art. And all human cultures can be compared under the headings of this scheme.

Far from the chaotic, indeterministic defeatism which overwhelms the amateur, and apparently even some professional anthropologists, this approach gives us a solid scientific foundation.

Incidentally, we also arrive at another conclusion. Anthropology, the science of culture, must study the same subjects as those which confront the student of contemporary civilization, or of any other period in human history. It must approach primitive culture from the angle of politics and economics, theory of religion, and jurisprudence. And here anthropology may claim a special position among the other sciences of human society and culture.

Its range is the widest ; it relies entirely on direct observation, for its sources are in the student's own field. It is perhaps the only social science which can easily remain detached from political bias, nationalist prejudice, sentiment, or doctrinaire zeal. If this social science fails to develop an entirely dis-

ANTHROPOLOGY AS THE BASIS OF SOCIAL SCIENCE

passionate study of its material, there is not much hope for the other branches of humanism. Hence, in vindicating the scientific character of anthropology we are working at the very foundations of social science. Anthropology has the privilege and the duty of acting as an organizing agency in the comparative study of cultures.

IV

ADAPTATION TO ENVIRONMENT AND DISEASES OF CULTURE

In order to appreciate the influence of environment upon culture, let us leave tropical Africa and move into the desert of snow, ice, and rock inhabited by the Eskimos. Their winter house, made of stone or of snow, has been described as a marvel of engineering, a perfect adaptation to climate and to the available material. It certainly is an example of thoroughgoing correlation between a material object and the necessities of life. Combining warmth, space, and ventilation, it provides during the long winter night comfortable places in which to lie and listen to the long tales of folklore, or carry on technical activities. The technological excellence of these natives is also shown in the construction of their sledges and their weapons, of their canoes and of their traps.

In comparison with this, some aspects of their culture seem under-developed. The Eskimos have been described as devoid of any political system or of legal institutions. They have been often accused

of extreme pacifism in that they do not slaughter each other in organized fighting. Yet this is perhaps not quite correct. For though they have no political chieftainship, they recognize the authority of the Shaman. He also acts in a roundabout way as an important juridical agency. They have their code of law, consisting of many taboos, the breach of which brings down evil not only on the wrongdoer but on the whole community. Tribal calamity can be averted only by public confession. After that the Shaman can magically re-establish tribal prosperity. Thus, as the Masai have anticipated psychoanalysis, so the Eskimos are the forerunners of the Oxford Group movement.

On the other hand, towards sex they have the same attitude as the Masai. They have also a somewhat similar type of political system, always with the exception that the one are extremely war-like, and the others have never heard of fighting.

Our approach to a scientific study of culture, through the various aspects which correspond to the fundamental and derived needs of man, does not break down even here, when we apply it to such a one-sided, in many ways stunted, and in other ways hypertrophied, culture as that of the Eskimos. For the Eskimos eat and reproduce, maintain themselves secure against weather and animals, have developed means of movement in space, and they also regulate the bodily development of the individual. Their culture consists, like all others, of the cardinal aspects : economics, education, law, politics, magic and religion, knowledge, crafts, art, and also recreation.

What about war? Some divisions of the Eskimos have a minimum of military organization. Others are completely ignorant of fighting. Since the polar and central Eskimos have no neighbours, nor yet any cause for internal quarrels and dissensions, they cannot have military institutions. This fact confirms our conception of the instrumental nature of organized activities. Where, as in their westernmost offshoots, the Eskimos are in contact with warlike Indian tribes, they have developed the organization, the virtues, and the apparatus of war.

In the study of war, as of any other aspect of culture, the strict application of scientific determinism is necessary. This is achieved by clear definitions, empirical concepts, and inductive generalization. All the wrangles as to the innate pacifism or aggressiveness of primitive men are based on the use of words without definition. To label all brawling, squabbling, dealing-out of black eye or broken jaw, war, as is frequently done, leads simply to confusion. One author tells us then that primitive man is a natural pacifist. Another has recently described war as indispensable for the survival of the fittest. Yet another maintains that war is the main creative, beneficent, and constructive factor in the history of mankind. But war can only be defined as the use of organized force between two politically independent units in the pursuit of a tribal policy. War in this sense enters fairly late into the development of human societies.

Only with the formation of independent political units, where military force is maintained as a means of tribal policy, does war contribute through the

historical fact of conquest to the building-up of cultures and the establishment of states. In my opinion we have just left this stage of human history behind, and modern warfare has become nothing but an unmitigated disease of civilization.

I have made this brief digression on warfare because it illustrates one side of the scientific or functional method in cultural analysis. This method is often accused of over-emphasizing the perfect integration of all factors within the working whole of culture. This is a misrepresentation. The functional method only insists on the fact that all the elements of culture are related to each other; they are not idle survivals of disconnected traits, but they function—that is, they are at work. It does not pronounce any appreciation or moral comment as to whether this work is good or evil, well or badly adjusted. As in the case of some primitive types of warfare, and certainly of its most recent developments, the instrumental analysis of culture reveals more cogently than dissection into traits the occurrence of catastrophic maladjustments of human society.

As you have noticed just now, and felt, perhaps, throughout the argument of this article, there has been a background of critical indictment running right through. I do not want to waste your time with controversy and polemics. At the same time, I do not want you to feel that we are running in open doors in insisting on an objective, sober, empirical, and non-mystical treatment of culture. We are engaged now in laying down the foundations for a sound method in social science. When

these are clearly and simply stated, they have a knack of appearing mere truisms. Science in the long run is nothing but common sense and experience built on a systematic basis, refined and clarified to the utmost limits of conceptual lucidity. So, briefly, I have been insisting that the anthropological theory must be objective, which means above-board and presented in a manner amenable to verification. Why? Because some of the leaders of contemporary anthropology still maintain that there is a subjective factor in all humanistic observation. To quote an eminent scholar: "All historical definitions are in their very essence subjective" (A. L. Kroeber).

I have been driving in the existence of a measure common to all comparative work in anthropology—the existence, that is, of a general scheme of human culture, universally valid. Why? Because it has been stated in so many words that "no common measure of cultural phenomena can be found", and that "the laws of cultural process are vague, insipid and useless" (Boas and Benedict).

I have again and again indicated that it is illegitimate to cover our inability to deal with certain facts by such mystic labels as the "genius of culture", or to describe this "genius" as Apollonian, Dionysiac, megalomaniac, or hysterical. Why? Because all these atrocities have been recently committed. Culture has been described as the "collective hysteria" of society. We have had recently a whole rainbow of colourful tags and epithets tied to the neck of each individual culture (Róheim, Benedict, Mead).

I have insisted that analysis must not be arbitrary; that the dissection of a culture, even as that of a corpse, must obey the laws of its anatomy, and not become mere butchery, a lifting-out of "traits" and the lumping of them into haphazard "trait complexes". Why? Because the most powerful school in anthropology still follow the precepts of Graebner, who would have us isolate "traits" and define them by "characteristics not founded in the nature of the object or the material". One of the leading American anthropologists tells us that an agglomeration of such traits into a complex "is historically most convincing when the traits are not related to one another". To regard culture as a jumble of disconnected and unrelated details may lead to amusing reconstructions though of doubtful value. In the process, however, it robs our whole concept of culture of all life and significance.

V

THE FAMILY AS THE CORNER-STONE OF SOCIAL
STRUCTURE

But let us leave aside this controversial mood. To make our point clear, let us concentrate on an object—the object of objects, in a way—the material embodiment of the premier institution of mankind, the family. We shall choose our example from yet another ethnographic area and contemplate a pile dwelling in Melanesia.

In sharp contrast to the arid steppes of Central Africa and the Arctic desert of snow, we are sur-

rounded here by a wilderness of water, coral reef, and swamp. The main symptom of man's adaptation to his surroundings is a remarkable achievement of primitive architecture, the house on piles. It stands firmly on its foundations of stout tree-trunks driven deep into the muddy bottom of the lagoon. Constructed of strong material cunningly fitted and lashed together, it resists the combined attacks of wind, waves, and weather.

To the lagoon dweller such a house is a fortress where he can take refuge and which he can defend. It is a watch-tower from which he can see the approach of suspicious strangers. It is also conveniently near to the coast, which he frequently has to visit in order to tend his gardens. The structure of the house is thus determined by the intertribal relations of the people, their economic pursuits, by climate and natural environment.

It can thus be studied only within its natural setting. But after man has invented, constructed, and improved his dwelling, and made it into a fortress, an economic asset, and a comfortable home, the house then dominates his whole mode of life. The outer shell of his domesticity influences the social structure of family and kinship.

Indeed, it seems that the higher the cultural development, the more ruthless and brutal becomes the tyranny of machine over man. Are we not at present hopelessly enslaved by our hypertrophied prosperity which we have not yet learned to manage; by our rapid means of communication which allows us to speed, but too often to speed but aimlessly? And last, not least, and worst of all, by our excessive

efficiency in the means of collective destruction? Once more a humanist may be allowed to reflect on the fact that the over-development of mechanical science and its applications have completely outgrown the progress of our knowledge of how to adjust our efficiency to really human aims and needs.

Since in my opinion anthropology should begin at home, let me give you an anthropological impression of modern culture and recount a personal experience in which I very poignantly became aware of the power of things over man.

No experience in my exotic wanderings among the Trobrianders and the Chagga, among the Masai and the Pueblo, has ever matched the shock I received in my first contact with American civilization on my first visit to New York, when I arrived there ten years ago on a fine spring evening and saw the city in its strangeness and exotic beauty. The enormous yet elegant monsters blinking at me through their thousand starry eyes, breathing white steam, giants which crowded in fantastic clusters over the smooth waters of the river, stood before me : the living, dominating realities of this new culture. During my first days in New York I could not shake off the feeling that the strange "genius" of this most modern civilization had become incarnate in the skyscraper, the subway, and the ferry-boat. Large insects in the shape of automobiles crept along the gutter called street or avenue, subordinate but important. Finally, as a fairly insignificant and secondary by-product of the enormous mechanical reality, there appeared the microscopic bacteria called Man, sneaking in

and out of subway, skyscraper, or automobile, performing some useful service to their masters, but otherwise rather insignificant. Modern civilization is a gigantic hypertrophy of material objects, and contemporary man will still have to fight his battle in order to reassert his dominance over the Thing.

But what interests us at present is to find the existence of a common measure between the residential part of the skyscraper and snowhouse, pile-dwelling and cow-dung hut.

In the material used, in structure, in architecture, in all, that is, which we can call the form of the object, there is hardly one trait in common. But look at the dwelling as a part of an institution. It appears at once that the principles on which each dwelling is integrated into organized human life and becomes the shell of this life are the same throughout humanity. In the penthouse on top of the skyscraper, in the snow *igloo*, in the *engadji* of cow-dung, in the *niyumba* of thatch, we find the same domestic unit—the family, consisting of father, mother, and children.

Is the resemblance only superficial? No. Functionally it is not merely a resemblance but an identity. The group is united by the same task, the essential business of reproducing the race. A universal type of legal charter gives juridical validity to the group. The act of marriage bestows legitimacy on the children, grants the consorts mutual privileges and duties, defines the domestic work of husband and wife; above all, it imposes on them the duty of looking conjointly after the children.

Human parents, unlike animals, are not allowed merely to throw up fresh organisms, but they have to introduce fully fledged citizens into the community.

Another fundamental difference between man and the animals is that under civilization parenthood develops into the wider network of relations which we anthropologists call the system of kinship. Here at once a universal generalization can be made. In every human society both parents share in procreation, in tending and training the children, but only one line of descent is legally relevant. Kinship is counted either in the direct mother line or father line. And the anthropologist is also able to state the reason why. Any ambiguity, any confusion in the tracing of filiation, inevitably leads to disaster and chaos in laws of inheritance and of succession. Even as it is, with one line of descent, primogeniture, or with the law of borough-English, ultimogeniture, most legal difficulties in primitive and developed communities are due to conflicts in the law of inheritance or succession.

Another universal law of kinship is that, under unilateral descent and the classificatory system of kinship status, parenthood becomes extended into clan relationship. The classificatory use of kinship terms, again, a curious linguistic phenomenon which seems to saddle every individual in primitive culture with a whole bunch of fathers and mothers, of aunts, uncles, sisters, and, alas, even mothers-in-law, is universal. To explain it whole libraries have been written about the existence of primitive promiscuity, group marriage, and the gradual

development of monogamy out of complete sexual and parental communism. All this is, in plain American, *bunkum*! Had the classificatory system been discovered by one who spoke the native language well, had it been studied scientifically, a very simple explanation would have been discovered.

The discovery of the actual live function of classificatory terms was made in Melanesia. I was able there to study not the product, that is, the ready-made so-called classificatory system of nomenclature, but the process of extension as it actually occurred in the life of the individual. I found that the piecemeal extension of linguistic usage runs parallel with the piecemeal transference of the child-to-parent attitude. The terms, thus gradually extended, do not in fact lump clansmen and clanswomen into groups of fathers, mothers, wives and husbands, siblings and children. The idea of group parenthood or group marriage appears preposterous to the primitive—he simply would laugh at the volumes of anthropological speculation on primitive promiscuity. It is the unadulterated product of the academic mind. In real native life terminological extensions function as quasi-legal metaphors. They exercise the binding force on the widening circle of kindred, a force which diminishes as the genealogical distance grows. There is an analogy between this phenomenon and the use of words in a spell, both being instances of the creative metaphor of the magical word.

In the same way, had the great variety of the forms of pre-nuptial relations and of relaxations of

the matrimonial ties been studied, it would have been recognized that they cannot be remnants of pristine promiscuity because they function as experimental methods of courtship.

Had I more time, I should discuss with you a number of important laws in the theory of kinship ; the principle of legitimacy ; the determinism in mother-right and father-right ;—the correlation of clanship and extended kinship with their function in primitive communities ; the function which might be roughly described as that of social insurance. We should see that the wider kinship groups disappear because in our more highly differentiated communities the State, charity organizations, friendly societies, and public services take over the functions of kinship. The theory of kinship here placed before you explains the phenomena of primitive life not as survivals or diffusions in terms of this or that recon-dite hypothesis or fantasy but in terms of observable fact and relations between facts.

VI

THE QUEST FOR FOOD AND PRIMITIVE ECONOMICS

We have found throughout our survey that the food quest and other economic activities leave a deep imprint on the whole culture. This truism, however, must be supplemented by a somewhat fuller appreciation of the place of economics in primitive culture. Let us once more concentrate on a concrete case, the system of agriculture of the Trobriand Islanders in Melanesia. Their whole tribal life is

dominated by agriculture. During the season of hard work, men and women practically live in the gardens. Then, while the plants sprout and grow, the women still have to do weeding. The men, on the other hand, devote themselves to other things, fishing and trapping, industries, canoe-building, and trading expeditions. One man only, the Garden Magician, still remains hard at work. He has been in fact from the beginning an organizer of work, directing the allotment of land, and, while ostensibly he was carrying on his rites, in reality he acted as tribal entrepreneur. Even when it comes to the harvest, he still has to bless the crops and then perform over the stored produce a type of magic which, by reducing the appetite of the people, makes food last longer.

But agriculture as an economic activity does not end with the harvest. The distribution of the products is an important business which penetrates into all the aspects of tribal life. Tribute has to be given to the chief, and on this tribute his political power is largely based. A quota of food has to be put aside for tribal ceremonies, and this finances largely their public and religious activities. Finally, the third stage of the economic process, consumption, presents many interesting aspects in this tribe, as everywhere else. For consumption means not merely eating, but also handling, display, ritual food offerings, and last but not least, sheer waste. For in the Trobriands the passion for accumulated food is so great that people prefer to keep their yams till they rot in the storehouses rather than to see the latter empty.

We see, then, that agriculture must be studied within the context of the whole economic system. For the vegetables are exchanged for fish ; they are used in the financing of enterprise and for feeding the craftsmen, for the capitalization of industries. This is especially interesting in the study of the large native jewellery, or, more correctly, tokens of wealth, which play a considerable part in the political system, and which are also ceremonially exchanged in the course of large intertribal expeditions which are practised throughout this region. Could we apply the same detailed study to Masai or to Chagga economics, or those of the Eskimos or Plains Indians, we would see that they also must be considered under the three headings of production, distribution, and consumption.

In production we would find everywhere the question of the social and cultural forces by which labour is organized. We would have to enquire how productive labour is maintained ; in other words, whether there are beginnings of capital and even of interest. Under the heading of distribution, we would not merely have to consider the complicated institutions of African marketing, peddling, and hawking, as well as more or less extensive forms of intertribal trade. We would also have to discuss the chief's tribute.

I think that throughout the world we would find that the relations between economics and politics are of the same type. The chief, everywhere, acts as a tribal banker, collecting food, storing it, and protecting it, and then using it for the benefit of the whole community. His functions are the proto-

type of the public finance system and the organization of State treasuries of to-day. Deprive the chief of his privileges and financial benefits, and who suffers most but the whole tribe? At the same time, it would be interesting to see how sometimes, especially in African monarchies, the chief's political power was abused for selfish and extortionate financial policy; and equally interesting to see what limits there were to such malpractices. In the few cases where I was able to investigate into this matter in central East Africa I found that the subjects could, and did, rebel, or else used sorcery, of which the monarch was usually very much afraid.

As regards consumption, we should find that the common eating of food, its preparation and the joint domestic economy, is one of the strongest ties of family life. Even more interesting would it be to study conspicuous waste under private conditions. It is possible to show that such institutions as the North-west Indian potlatch and the large displays and redistributions of food practised all over Oceania are not merely a curiosity. The passion for wealth engenders thrift and stimulates production. The power of wealth as a guarantee of legal contracts or as public payment for services forms one of the earliest binding forces in which economic value influences and enhances social organization and solidarity. The delight which the Trobriander feels in seeing his yams rot corresponds to an important economic attitude; we have here a standardized sentiment which crystallized around accumulation and permanence of

foodstuffs, the sentiment which sets economic security above immediate satisfaction.

The anthropologist is often asked by elderly ladies or young girls: "Is primitive man an individualist or communist? I want to know that, because I want to know whether human nature is communistic or not." I could refer to one or two instances where a scholar of high repute has played into the hands of the lady questioner, old or young. As a matter of fact, the anthropologist can give an opinion, but only as to the workings of the institution of property and not as to that vague entity, human nature. Communism as public control of private property has always existed and must be present in every culture, simple and developed. Communism as absence of individual property does not exist under primitive conditions.

Take the prototype of all wealth, value, and property: soil used for agriculture. Here it is very easy to juggle with words, for on the surface a pastoral, nomadic people are communistic in land. Yet an intelligent analysis shows that in the effective use of land they are not more communistic than the New Yorkers who use their public thoroughfares jointly. The economics of cattle, which is the effective way in which land is used, is always subject to individual ownership. Tillers of the soil who use the land directly invariably appropriate the soil, at least for the period of tilling. A tribe in Central Africa, the Bemba, among whom I was able to do some work on this subject, have an unlimited supply of land. The title is vested in the chief. It is controlled by the local headman, and every indi-

vidual is allowed as much as he likes. But once the boundaries are marked, there is no trespassing, no common use. There is full and exclusive individual appropriation for the period of from three to five years while cultivation goes on. Even then quarrels about land are more frequent than about women.

The Trobrianders have an extremely complicated system of land tenure, the gist of which is that the titular owner very seldom uses his own property, but receives an adequate and conveniently situated portion of land for which he pays a nominal rent. Among the Chagga ownership is individual, but if a man owns more than he can actually cultivate the community disposes of the surplus to someone who is in need of soil.

Complete communism of land actually under cultivation is never found in any primitive society. Production is a process in which man invests labour and intelligent foresight, and at least as much of his wealth as is necessary for planting and for keeping himself alive while he works. No free human being will do it permanently without some legal guarantee safeguarding for him the results of his efforts. The guarantee given to each free individual that the results of his efforts will be his to use or to give is tantamount to individual ownership. Where there are slaves, pawns, or serfs, there may be a class of people who work without any claims to the fruits of their labour. But such communism turns men into slaves, serfs, or pawns. May this not be true of all forms of communism?

Another interesting lesson which we can learn

from an anthropological survey is in the analysis of profit. We are often told that with the abolition of private profit all evils, such as war, sexual jealousy, poverty, and even drunkenness, will disappear.

There is no doubt at all that profit lends itself to abuse through dishonest financial manipulation and the running, in the interest of shareholders, of enterprises which ought to be directed to public service. It must be controlled by public agencies in primitive as well as in civilized communities. But is it necessary to change the whole social order, nationalize all wealth and means of production, in order to reach the desired end? To me the Marxian doctrine of profit entails a complete misconception of the relationship between the economic factor and other motives and drives in human society. The pocket is not the only channel by which wealth can be maldistributed and abuses canalized. Vanity, doctrinaire zeal, incompetence, and personal ambition cause as much havoc as does greed. The men who control production—in Africa or Europe, in Melanesia or America—do not and cannot fill their pockets or bellies with gold. Where they actually do harm is in mishandling and misusing the production and distribution of wealth. In order to prevent that, public control by disinterested agencies is necessary. And here it is obviously better to have a system in which control of wealth, legislation, and the executive use of power are not concentrated in the same hands, but vested in separate agencies. The totalitarian state and the African autocracy are not models of sound economic systems. The real advance lies in the gradual piecemeal reform, in-

volving all the parts of the economic and political organism. An integral revolution destroys, but it does not create. The concentration of all controls in the same hands means the abolition of all control.

VII

SAVAGE EXOTICISMS AND SCIENTIFIC ANTHROPOLOGY

So far we have concentrated on prosaic, ordinary, non-savage aspects. This has been done on purpose, for, as I have already insisted at the beginning, nothing has hampered the development of a really scientific study of primitive humanity more than the taste for savagery. It all started with Herodotus, who amused us with talks about lotus-eaters and man-eaters, about queer sexual habits and gastronomic perversions.

If anthropology is to become the comparative science of cultures, it is high time it stepped out of its herodotage and anecdotage. It must turn to the fundamentals of human culture, in simple and complex, primitive and highly developed forms alike. It must study primitive economics and political systems, the theory of kinship and social organization, early jurisprudence, and systems of education. It must study all of these across the widest comparative range of human experience.

Not that we could not profitably dwell on some of the primitive eccentricities of man. Cannibalism as a system of foreign policy is a sound way of solving international complications: it is a rapid and

effective manner of assimilating racial and national minorities. To run away from or to turn your back on your mother-in-law, many of us feel, would be an amiable and highly rational way of securing domestic happiness. The eating-up of decrepit parents is a good method of old-age insurance, while expressing fully an appreciation of one's progenitors.

Seriously, however, let us remember once more that in most of these queer and sordid customs there is a core of rational and practical principle, and also a quota of belief or superstition which on balance is not always completely foreign to us. Cannibalism is as repulsive to us as the eating of underdone beef or mutton is to the sentimental vegetarian, or the swallowing of live oysters would be to a Jain priest. But after all, meat is meat, and where there is a scarcity of it a strong nervous system cannot be too finicky or allow imagination to run away with it. But cannibalism also involves the fundamental belief that by eating your slain enemy you acquire his personal qualities or his spiritual virtues. And here just stop to think for a moment. Is this belief of a mystical or spiritual union by ingestion so absolutely alien to us? Can you not think of very highly differentiated and spiritual religions where mystic union is achieved by a sacrament in which the spiritual substance is taken by mouth? Between the lowest and crudest customs and the highest spiritual act there may be an unexpected common measure, so that charity may finish abroad when knowledge begins at home. By placing thus each of these strange and queer customs within its proper psychological and cultural

setting, we can bring it near to us, we can perceive in it the universally human substratum. In other words, we have to carry out our analysis of primitive belief or superstition by means of universally valid concepts and thus make it amenable to scientific treatment.

There is no doubt that most "queernesses" and exoticisms of savagery reside in what we call "superstition" in others and "belief" in ourselves. Magic is obviously further from our comprehension even than primitive religion. Those acquainted with ethnological literature know how much attention has been devoted to magic. It is usually regarded as a primitive form of mental aberration and as a typical symptom of savagery. Tylor defined magic as a grossly distorted type of animistic philosophy. Frazer's theory presents magic as a perverted form of primitive pseudo science. Professor Freud, again, sees in magic a typical delusion of paranoia and ascribes it to primitive man's belief in the omnipotence of thought.

VIII

THE FUNCTION OF MAGIC

In truth magic is nothing of the sort. Here, again, it might be best to follow a magical act and see what we can learn from it. I was sitting in a lagoon village built on piles when, at an early stage of my Melanesian field-work, I had my first experience of a severe monsoon hurricane. After the first few strong blasts a general commotion arose:

people could be seen running about and screaming, some were trying to make fast the canoes, others to put away some of their chattels. They were all in panic. The onslaught of the wind was terrific, and I had to muster all my nervous energy to keep up the white man's burden of dignified impassivity.

And then I received my first intimation of the character, the power, and the influence of Melanesian magic. When the wind was at its worst a loud chant suddenly arose from one of the platforms. The hereditary wind magician of the community was about to calm down the storm in order to prevent any destruction which it might wreak.

The words of the spell were simple : he ordered the wind to abate, to avaunt, to lie still. He addressed the wind from the mountain, the wind from the lagoon, the wind from the rainy clouds, and ordered them to lie down and lie still. He asserted that no harm could be done to the village.

What was the effect of his imprecations on the wind does not matter to us sceptics, but the effect of his voice on the human beings was truly magical. His voice rose like a mighty wall of safety between the frightened human beings and the unchained forces of Nature. It was evident that the villagers now felt safe. They became more and more calm and reassured as the magician proceeded with his long spell. They behaved quite differently after the magic had been chanted. And immediately after he had finished his spell the magician took the practical situation in hand : he gave orders what to do, orders which were immediately obeyed in a disciplined, organized manner.

I realized then and there what the real function of magic is. On the psychological side it leads to a mental integration, to that optimism and confidence in the face of danger which has won to man many a battle with Nature or with his human foes. Socially magic, by giving leadership to one man, establishes organization at a time when organized and effective action is of supreme importance.

We have seen exactly the same function of magic in Trobriand agriculture. There also the magician acts as organizer to the community, while to each individual he gives confidence, spurring him to greater effort. And here I would immediately like to add a rider. If we were to examine either the wind magic or the agricultural magic point by point, we should come to one extremely important conclusion. The activity of the magician never encroaches on the technique or subject matter of practical work. In agriculture the Trobriand magician bestows additional fertility on the soil, forestalls pests and blights, the ravages of bush pigs and wallabies, destruction by drought, and other unmanageable causes. He never does magic instead of cutting down the shrub or fertilizing the soil with ashes.

Magic is always carried out on the principle, " Magic helps those who help themselves ". It deals with the unaccountable, unmanageable elements of luck, chance, and misfortune. It never tackles the ordinary forces of Nature, which are always managed by man with his own hands. Exactly the same may be said of the magic of war, of love, of enterprise, and of health. Everywhere magic only steps

in where knowledge has declared its inability to deal with the situation. Far from being an assertion of the omnipotence of thought, it is rather a humble declaration that man throws himself on the mercies of higher supernatural forces, revealed through sacred tradition.

We define magic as the ritual act performed to bring about a practical result unachievable by man's unaided force. The ritual act is based on the belief that by the strict observance of traditionally prescribed behaviour, bodily and verbal, man can influence the course of Nature and the rulings of Fate. This belief is always founded on traditional mythology and on the empirical affirmation of the power of magic. Magic has its ethical value in that it affirms the positive issues and thus leads to courage, endurance, and perseverance. It also makes people join in ritual work for the common good.

To define religion quite briefly, it differs from magic in that it does not aim at practical ends in emergencies of ordinary life. Religion, indeed, deals with the permanent and enduring problems of human existence. The acts of religion are not means to a practical end. Each religious ritual is an end in itself ; in communion with divinity, in sacrifice the worshipper ministers to the pleasure of his god or gods ; in acts of ancestor-worship homage is made and union achieved with the spirits of the dead. Each of such acts brings about its own end and compensation. In one important branch of religious activities, those connected with the death of a human being, we also see that mourning and wailing, ritualized grief, and burial centre around a spiritual

rather than a practical necessity : that of removing the pollution of death and of ensuring the spiritual welfare of the soul of the deceased. But it is easy to see that religion also removes the mental conflict in face of metaphysical danger : religious belief affirms the positive issues in promising man immortality, in bringing him in touch with Providence, in setting him on the right way to reach personal salvation and the good of the community.

IX

THE PLACE OF KNOWLEDGE, RELIGION, AND MAGIC IN CULTURE

How can we link up religion, magic sorcery, and divination as cultural phenomena with our noble system of interpretation in which we conceive of culture as the vast apparatus for the satisfaction of human needs ? We have seen that the fundamental needs of the human organism, those of food, reproduction, safety, freedom of movement, are satisfied under culture by *ad hoc* systems of organized activities. Culture thus establishes the quest for food and the industries, technical constructiveness, courtship and marriage, kinship schemes, and military organizations.

We have seen how this cultural, roundabout way of indirect satisfaction imposes secondary or derived needs. These are not innate drives of the organism but highly derived implications of man's cultural response to innate urges. Thus economic desires, values, standards, legal inhibitions, and the con-

sciousness of one's rights and privileges, social ambition and kinship sentiments, political prestige and submissiveness, are essentially human characteristics. But they are imposed by the circumstances of human existence in organized communities and not by reflex or instinct or any factor of innate endowment.

But this is not the end. The vast machinery of culture is maintained, regulated, and preserved by the body of traditional lore. This is made possible by language, which allows man to formulate general rules and condense them into concepts. Thus, to systems of action there correspond systems of thought. Action must be based on foresight and on the grip of the context. Man deals with Nature and his fellow beings by constructive and imaginative handling of each situation. He has to lay down the results of past experience into systems, fixed, standardized, yet withal plastic. These he hands over from generation to generation.

Systems of human knowledge exist even among the lowest primitives. They must have existed from the very beginning of humanity. The widespread misconception that primitive man has no rudiments of science, that he lives in a hazy, mystical, or infantile world, has to be rejected in the light of our fuller knowledge of primitive cultures.

But though knowledge is easily accounted for, what are the natural foundations of religion and magic? That which establishes man's final superiority over the animals, his power of symbolic and constructive thought, imposes on him also great burdens. It reveals to him the fundamental un-

certainty and limitation of his own existence. In order to think clearly man has to look back and remember ; he has to look forward and foresee ; and that means he is subject to fear as well as to hope. Man, of all the animals, cannot live in the present ; he cannot lead a hand-to-mouth existence from moment to moment. This must finally bring him to ponder on topics where emotions blend with cold reason and where the answer is dictated by emotions though it is largely framed by reason.

What is the ultimate destiny of man and of mankind ? What is the meaning of life and the relations between man and the universe ? Whence have we come and whither are we bound, and what is the sense of all man's fears, sufferings, and disappointments ? Metaphysics and religious speculation are as old as knowledge and as old as language itself. At the beginning they are extremely simple and crude. Animism and beliefs in magical force, fantasies about sorcery, ghosts, vampires, and totemism—that is, the belief in the spiritual affinity between man and Nature—are the answers of primitive man to the fundamental riddles of life. Once we realize their nature it is easy to perceive their great value. They are well adapted to the limited conditions in which primitives have to live, they contain the answer to the questions of whence and whither, and above all they supply man with ritual means of getting in touch with spiritual forces, of establishing communion with ancestral spirits, totemic beings, or divinities, and they allow man to secure his immortality and thus to give sense to his life.

Knowledge, magic, and religion are the highest,

the most derived imperatives of human culture. Indirectly and through several relays they also are the outcome of man's organic needs. The craving for religion and for magical power, and scientific curiosity as well, are not instinctive. They are the outcome and the correlate of that intelligent adjustment of man to his environment which makes him the master thereof. Magic and to a much higher degree religion are the indispensable moral forces in every human culture. Grown out, as they are, of the necessity to remove internal conflict in the individual and to organize the community, they become the essential factors of spiritual and social integration. They deal with problems which affect all members of the community alike. They lead to actions on which depends the welfare of one and all. Religion and to a lesser extent magic thus become the very foundations of culture.

X

SUMMARY AND CONCLUSIONS

By now, I trust, we all realize that there exist laws of cultural process, and that their discovery is the main task of scientific anthropology.

I have started with the affirmation that there is a science of culture. I hope that throughout the succeeding pictures of living cultures with their variety and diversity of forms, throughout the analysis of what these cultures have in common and how they differ, we have all realized that there is an underlying fundamental sameness; that it is

possible to establish the common measure which is indispensable for the scientific treatment of any type of reality.

We have found everywhere that observation can be made fruitful, relevant, and convincing only if it is inspired by a theory of the nature of culture. Culture in the first place has to satisfy the organic needs of man. From the indirect, that is cultural, satisfaction of these there arise further instrumental imperatives. Finally, in the spiritual realm, culture implies the integrative principles of knowledge, religion, ethics, and magical technique. Every human culture can be analysed by the same universally valid concepts, derived from a theory which again consists of a system of general laws. At the same time, we have found that there is only one type of really scientific theory, and that is a theory which is dictated by observation and which can be tested by it.

The general concepts and laws I need not summarize for you. They result from the universal occurrence of such aspects of human culture as economics and education, law and political organization, magic, religion, art, and recreation. The cultural activities, again, in every society integrate into natural units, which we have called institutions. And here again it is possible to draw up a list or table of such institutions. The family, the extended kinship grouping, the clan, the village community, the tribe, and the nation are such universal institutions. If we add to them such more diversified types as occupational groups, economic teams, voluntary associations, we have a number of cultural

entities each of which is amenable to laws and generalizations, and each of which must be studied by the same outfit of concepts.

In the vast system of institutional activities which corresponds to the fact of reproduction, we have listed such laws as the dominance of the initial situation; the principle of legitimacy, defining the legal aspect of parenthood; the further principle that marriage leads to the establishment of a domestic unit; the concept of the unilateral and bilateral kinship principles in reproduction, and the principle that the clan is not equivalent in influence to the family, but a derivate.

Whether we study economics as an aspect or whether we proceed to the definition of such specific economic institutions as agriculture, cattle-breeding, the organized activity of the hunting team, we can and must base our studies on a series of general laws or principles. We have to enquire into the economic process in its three phases: production, distribution and exchange, and consumption. We have to study these three phases as they permeate the whole of tribal life. We cannot understand the titles to property except through the rôle which they play in production and the influence which production exercises on property. Again, we find that unless we consider economics in conjunction with the organizing forces of religion and of magic, of law and politics, we shall always miss some of the most important realities of economics.

Had we more time, we should have been able to construct equally exhaustive theories of primitive law and primitive education, of the part played by

re-creation in primitive societies, and of the principles of artistic activities in their social and cultural aspect.¹

In the course of our analysis we have had to emphasize the point that every cultural phenomenon presents to us three main facts : the material, the social, and the spiritual. The first is best approached through the analysis of the material substratum of culture ; the second by the study of institutions ; the third through the linguistic approach. For, although I am not a behaviourist, I believe that it is best to study mental processes in their objective, outward manifestations.

Thus I maintain that the subject matter of the comparative study of cultures does lend itself to sober, scientific treatment. I also maintain that this treatment is indispensable, especially from the point of view of actual research in the field.

I have tried to define the scope of anthropology, the pioneer among social sciences in the empirical approach to determinism. Determinism does exist in cultural process, and the scientific statement of this process must be deterministic, objective, fully documented, and unaffected by personal and impressionistic distortion. Scientific anthropology, as you have seen, must work on the foundations laid down by biology and physiology ; it must work hand in hand with the psychologist ; and it must learn as much as it can learn from the student of environment, the geographer.

¹ The reader might perhaps compare my *Crime and Custom in Primitive Society* (1926) ; the article "Kinship" in *Man* (1930), p. 19, where a bibliography of my publications on kinship will be found ; and the small book, *What is Culture?* shortly to be published.

Our plea for scientific anthropology, of course, is not tantamount to an indictment or exorcism of all the attractive and amusing speculations. Evolutionary *aperçus*, indeed, I regard as indispensable. Careful and sober diffusionist hypotheses seem to me quite profitable. To minimize or discard a really human interest in humanism would be a crime. To mix up or confuse the emotional or artistic approach with the scientific is a serious lack of judgment. The two approaches must be used simultaneously : they have to complement each other. But science must furnish the foundation.

The scientific theory of culture has also brought to light some vital truths. Is the recognition of the universal stability and permanence of the family and marriage of no interest in these days when domestic institutions seem to be threatened on every side ? The anthropologist might almost add : " As it was in the beginning, is now, and ever shall be ". That communism cannot be a panacea for all our cultural troubles may also be an interesting appreciation. We have seen that communism alone is never to be found in any culture, however primitive or complex. We have seen, also, why communism as an economic system cannot work except in conjunction with slavery. On the other hand, pure individualism does not exist anywhere either. So that some admixture of communism, that is, public control, has always worked, and worked well. But it cannot work wonders, or cure all evils. We have defined the rôle of the supernatural as an integrating and organizing force in society. One of the implications of our analysis was that the abuse of law and

political power must always lead to cultural disaster. Science and virtue, efficiency and endurance, courage and chastity, can never be dictated by edicts, nor enflamed by oratory, nor yet forced into existence by a system of police spies and police brutalities. To replace religion and morality by the secret service of a totalitarian state is a disease of culture.

For we have fully acknowledged the existence of cultural maladjustment, and even of lethal ailments of civilization. The very concepts of adaptation and function imply degrees and qualifications, from excellence to decay.

Our present civilization is undoubtedly passing through a very severe, perhaps a critical stage of maladjustment. The abuse of legal and administrative power ; the inability to create lasting conditions of peace ; the recrudescence of aggressive militarism and magical trickery ; the torpor of true religion and the assumption of a religious garb by doctrines of racial or national superiority, or the gospel of Marx—all this shows that, while we have become the masters of inanimate Nature, we have connived at the complete enslavement of man by machine.

The greatest need of to-day is to establish a balance between the stupendous power of natural science and its applications and the self-inflicted backwardness of social science and the consequent impotence of social engineering. To repeat a truism just mentioned, we have allowed the machine to overpower the man. One of the reasons for this is that we have learned to understand, hence to respect and

to handle, the mechanism. But we have failed to develop the really scientific spirit in humanism.

To-day the freedom to exercise purely scientific determinism is threatened in many countries. This freedom is even more essential for social than for natural science. It is, therefore, legitimate to insist on the value of this freedom, and also on the necessity of its wise and effective use on the part of the scholars.



DR. EMANUEL MILLER

CHAPTER XIII

NEUROSIS AND CIVILIZATION

SOCIAL studies have in the past, and to some extent in the present, been devoted to the description and analysis of society without much reference to the part played by factors of individual psychology.

The examination of primitive and modern communities has revealed so many interesting points in their organizations and in their evolution that sociologists have been preoccupied and perhaps unduly satisfied with the purely social functions of the members that make up a community. It is true they have concerned themselves with the social relationships of members of a group, such as kinship rules and the division of functions. Anthropologists too have been more concerned with the connection between various folk practices in time and place than with the mental causes from which they have sprung, or with the mental conditions which maintain them. It must be admitted, however, that in recent years they have been interested in such topics as the evolution of marriage and in the effects that an interest in procreative function has had upon fertility rights, initiation, and so forth.

Few sociologists would deny that psychology can

throw some light upon man's social reactions, but, held by the broader outlines of social evolution, they are not always prepared to pass from these clear superficial markings to consider the motives which make up the individual minds of men, and which must contribute to the shaping of social conduct and ultimately of social institutions. For society is, after all, a pattern of interacting minds, even if we concede that such minds reacting to a common environment, acquire a common mental denominator. The adjustments which individuals make in common to an environment must have some psychological determinants, and these are not always within the range of conscious awareness. The sentiments which each of us apply in group life are no less effective than are the social sentiments that group life supplies to each of us ; and these sentiments are not always within the range or span of conscious awareness. Such gratifications as we appear to derive in society may be the end results of mental struggles, their original point of departure having become lost to us, and are only retraceable along a devious path of retrospective analysis. The mere classification of social forms is hardly sufficient to explain society unless we discuss the motives underlying the development of group life.

The problem of conduct has been a subject of discussion amongst sociologists, but such debates have usually been conducted along the lines of ethical philosophies, utilitarian and otherwise. Such writers as Professor L. T. Hobhouse, who may have struck out new paths in social analysis, colour their psychological points of view by strong ethical con-

siderations, and Westermarck, from whom we have learnt so much about history, human marriage, and the origin of moral ideas, almost dismisses the subject of the incest barrier by regarding it as due to an innate abhorrence. In short, there is a comparative absence of any deep psychological analysis of the reasons for social cohesion and social formations.

Professor McDougall was probably the first to consider social phenomena in the light of man's instinctual and emotional endowments, and writers such as Tarde, Le Bon, and Trotter have attempted to establish a link between certain aspects of society and psychology through the concepts of the Herd Instinct and the Group Mind. Professor Sigmund Freud has speculated on society and its origins from an angle not dissimilar to that of McDougall, for he too, and more intensively, traces all human behaviour, both group and individual, from the operation of instinctual appetites and the way in which these instincts are aided and frustrated by the impact of human beings one upon another. He argues that both civilization and religion serve a useful and perhaps an imperative purpose in protecting men from a fear of Nature and from the hardships which she imposes upon human beings. But he argues that the refuge which men have taken in civilization has led to so much frustration of the instinctual needs that human beings experience that many, if not all, social relationships and social organizations are the results of these frustrations, and that civilization in consequence is the source of our discontents.

For on what economic calculus can it be said

that the sacrifice of individual desire is repaid in the form of that security which social life does undoubtedly bring? If we could but get back to the virtuous general will which Rousseau declared to be the basis of the good society! How is it that such a simple remedy as a social contract has been so little achieved, for surely history shows us that societies are rarely entirely stable and its individual members do not find in society a constant source of happiness? Rousseau may have discovered nothing, as Madame de Staël exclaimed, but in his very slogan he states a fact which has needed the passage of a century for psychology to illuminate. But in attempting to throw new light upon man's social enslavement, psychology has denied his theory of social origin and has made even of the good society the origin of our sickness and of our discontents.

The path along which frustrated needs have moved in their effort to obtain a meed of satisfaction is hidden in a mental undergrowth. The instinctual needs that lie at the root of human nature undergo many transformations before they appear in the socialized life of man, which admittedly gives some, but not entire satisfaction to the individual.

These words may appear to be a far cry from our subject. Few will deny the nature of the physical causes which render imbeciles, general paralytics, drug addicts, socially misfits and potential danger to society. At all points society is implicated causally and effectively, but it would be a calculation which social statistics do not want to decide *how much* society is implicated effectively. But the

study of neurotic illness demonstrates that social life is not entirely free from responsibility for the production of mental unhappiness and maladjustment, and furthermore, it has shown that much individual mental illness has profound repercussions upon society.

It would seem that we ought to go back to social origins to ascertain how man was sown with the seeds of neurotic behaviour. At all events the speculation, and that is all it may prove to be, may have the power of shedding indirect illumination. It may not produce the facts we need, but this approach might open up avenues of enquiry and discovery.

With regard to the first point, there is little evidence in support of the view that society came together by the tacit consent of its constituent members in order that they should obtain a measure of good by the sacrifice of their individual desires. That unconsciously, and with only dim awareness, men were brought together in the face of common dangers and for the pursuit of common aims is obvious enough, but even under our own eyes we see how the group, at one moment galvanized into unity by the imminence of a common stress, is soon riven by inner dissensions as soon as the crisis born of external insult passes away. And, moreover, even in the face of danger all dissentient voices are not silenced, rival parties emerge, conflicting allegiances appear. Even the egoism of leaders and their quest for power will lead to the violent destruction of a rising opposition. How are we to account for the presence in the social body of so

many conflicting emotions? History gives us countless examples of rival group passions which outlive their time. Time and time again economic emergencies which could have been settled rationally have aroused conflicts which have repeatedly been expressed in the form of slogans, which suggest that men have always been moved by forces that lie deeper than the troubles that are alleged to have given them birth. Loyalties seem to spring from some hidden love, rebellion and war from some hidden hatred. We must ask ourselves, what is the origin of these disruptive forces in society? Is there an analogy between social upheavals and discontents and the upheavals and discontents which we see in the mental sicknesses of individuals?

Freud would have us believe that in *primaeval* times the family horde, while occupied with seeking economic satisfactions, was also preoccupied with the conflict between a father leader whose masterfulness made it possible for him to satisfy his sexual needs to the exclusion of the needs of his growing sons. Physically and emotionally incapable of checking their sexual needs, the sons slay the father and take possession of his wives and daughters. Still animated by the fear of the father which they experienced in his lifetime, they remained conscious of his personality even after his death. Thus, says Freud, arose the awful guilt of parricide, and in the overwhelming desire to expiate the violent death of the horde's chief, the sons deify him and raise against themselves the incest barrier or taboo, which prohibition appears to have become

the basis of many kinship rules and social forms or organizations which we witness in the lives of simpler peoples. Nay more, the incest barrier is found embedded in our codes to-day, colouring many marriage rituals and activating many of the conflicts that lie at the roots of a multitude of neurotic and psychotic conditions. To Freud many of the peculiarities of highly developed communities are conditioned by the survival in the unconscious mind of this *primaeval* problem. The banding of men together, the adoration of a leader, the will to overcome and to overthrow tyrannies, the colourful loyalties on the one hand, and the treasons on the other, are all indications of the continued activity in the depths of the mind of a desire to express the *primaeval* conflict of love and hate. To Freud in particular these two motives are like a counterpoint in the sad music of humanity. How men have succeeded in accepting and even cherishing the barriers and restrictions of social life is not entirely clear to the student of history, for history, without taking into account deep human motives, cannot explain the constant repetition of revolt against restraint which has, for example, made regicide the passionate pursuit of individuals and of groups.

But yet when events of this kind occur in the life of the group as such, we are prone to accept them merely as the vicissitudes of history, landmarks in economic and social development and adjustment. The Freudian psycho-pathologist claims to have demonstrated that this external warfare, manifest in social change and upheaval, has its counterpart in the unconscious life of each of us and, in fact,

that this unconscious life *is the persistence of a primaeval problem*. But this primaeval problem is no mere survival ; it is not a fly preserved in amber, a fossilized fragment of early human social history. It is the driving force in individual and group life, a potentiality in all, a kinetic process in many, born of the very instinct which lies at the root of life, the procreative function implemented by the individual's love needs. Somehow the burden within the individual person is resaddled upon the back of the group, and although in the course of history crystallized and stratified in institutions and social usages, it is sufficiently forceful to produce its rifts, faults, and volcanic eruptions. This process, whereby instinctual needs are gratified and inhibited in their aim, is both release and burden at the same time. For example, in adoring a leader the individual in some measure expiates or atones for his hidden parricidal wishes, for in accepting the leader he abandons himself in identification with him. He becomes part of a band of devotees who not only feel strong in unity, but are now free in doing the leader's bidding to perform acts which as individuals they would shrink from. In identifying himself with his leader he borrows his motives, shares his hatreds, and can yet love himself and others as he loves his leader. Thus an individual subconscious conflict is ventilated and passion is legalized by the group sanction. If it were to continue to work sullenly in the unconscious, it would produce individual havoc, giving birth to distorted passion, fear, hatred, displaced love, and finally neurosis. Thus society and neurosis on this view become reciprocals.

Freud has always admitted his speculative bent and has stated more than once that he is driving to its inevitable conclusion an argument which starts off with a purely social hypothesis. He states, for example, that his theory of the *primaeval* horde with the dominating father leader tyrannizing over the sexual life of his sons may be nothing more than a Just-So Story. Even if with some sociologists we abandon the speculation to the limbo of interesting theories, the evidence of clinical psychology cannot be treated completely in this fashion. The analysis of individual human minds gives indication, if not actual proof, of the existence in the child life of each of us of passionate conflicts with parental figures, and that these conflicts do undoubtedly influence the subsequent character and behaviour of individuals. And, moreover, the analysis of character by the psycho-analytic method has shown that character is produced in part at least through mechanisms that are the same as those which produce neurotic illnesses. In other words, quite independent of his theory as to the nature of primitive society, he and his followers have demonstrated that the creatures that make up human society tend to carry with them from childhood the scars and markings of early struggles, which colour their social behaviour, their prejudices, and their loyalties.

In addition to the views which form the central idea of Freud's contribution to the social character and social antagonisms of man, others hold opinions which appear to supplement his theory without necessarily vitiating his central idea. While Freud holds that the *primaeval* problems explained above

are most clearly illustrated in childhood years, others (since Loyola) have also admitted that childhood psychology holds the basis of character. In these formative years the primitive in man shows most clearly, and even the simpler peoples in their social practices realize that the child up to puberty must be moulded, even rigorously, to conform to tribal usages. The relationships between child and parent and the conflicting emotions to which these relationships give birth form a pattern of behaviour that conditions or influences all future social responses. When the child enters the wider group of society in school, and later in industrial and civil life, he brings with him a character which is coloured by the emotions and restricted by the inhibited instincts of the first five years of life. But conduct is not only conditioned by the love and hate motives of the so-called Oedipus complex or situation ; love and hate are also in no small measure produced by the dependency of the child upon the mother during its very tenderest years. The child literally batters upon her for its food, warmth, and protection ; the little sensualist cleaves to her ; yet with growth and maturing, it sees in her not merely a giver and protector, but one who regulates and frustrates. Dependency engenders a fear of separation, not only from comfort and safety but from that sensual gratification which comfort and physical satisfaction give. The mother, therefore, in both sexes is not only the prototype of loving care and every form of nostalgia, but she may become in addition the arch frustrator, the first intimation of an outer world or not-me which limits and perhaps hurts. The child

may, ungraciously as it appears to us, turn and bite the hand that feeds it. The child, in fact, may expect too much from its mother. It may ultimately expect too much from the world and, if it has suffered frustration in weaning, it may expect little of the world. With a nice balance between mother and child there is a taking and a giving of love on both sides. In the tender relationship of mother and child a mutual feeling grows up which may be a contribution to all future social enjoyments. With a disturbance of this balance the future capacity to accept love and to give it, in fact to co-operate, is limited whether it be to co-operate with a love-mate or with a fellow citizen. Thus in the early years of life there is established with some degree of finality the pattern of love in giving and taking. The establishment of harmony or disharmony in these years may be the basis of comradeship on the one hand and misanthropy on the other, group allegiance and rebellion, the will to accept benign authority, and the readiness to question the mildest coercive principles of group life.

Instinctual forces cramped, and a tenderness however sensual not experienced, will produce emotional disturbances in later life. The organism seeks to live to the full, to expand in and from its environment, and in its efforts so to do, it must seek satisfaction from its human environment in order that it should eventually be free to face the difficulties of the world with courage and with fearless intelligence. The self grows by learning how much satisfaction can reasonably be obtained from this interplay. It learns what to expect and how to

adjust in order to achieve these expectations. The parental figures leave an indelible imprint upon the young mind. As loved, respected, and feared objects, the parents are assimilated into the growing self and become that part of it which is the principle of conduct. If benignly absorbed, they become truly parts of the self, regulating the turbulent instincts by using them for reality purposes; that is, in the interplay with a world of real things and real persons.

If, however, this process of assimilation of the parental figures is not harmoniously achieved, and should parental authority now become an inner terror, they become at times a crushing and humiliating weight to be humbly borne, or an incubus which can only be lifted by death itself, or by a homicidal attack upon another person who becomes the projection of this inner hated thing. In this way the inner battle of forces emerges as victorious in the balanced and vigorous character, or it may end in the disguised defeat of mental illness. On this view, therefore, no-one can be entirely free. We are at most relatively free, or relatively enslaved. The first judgment in childhood becomes a perpetual last judgment which may endure a lifetime, influencing every social contact that we make. In this manner is each individual flung upon society: some with neurotic efforts at false adaptation, some with characters which mask our inner subterfuges.

Is it surprising, then, that society finds it difficult to satisfy all needs and every shade of character? Civilization has, to be true, a means of satisfying economic needs which keep men together,

but the price that is paid to maintain social cohesion for the easier satisfaction of common economic needs is counted out in the mental debts of individuals who seek repayment by pleasures, privileges, and illegitimate passions, and by a hundred and one evasive means. It is true that between men and women there are bonds of love in plenty. In sexual satisfaction, parental devotion, much is obtained by each member of the community, but the study of neurotic origins can alone make clear to us the apparently inexplicable shortcomings of man in society. For neurosis is, after all, a social maladjustment, an inability to accept limitation even in the earliest years. It is a breakdown in the fundamental love-ties between members of the group, which is an echo of some earlier tie which has never been completely established, or which perhaps was too strong to make social acceptance possible.

In paraphrase of Rousseau, we can say: "Man was born free to love but we see him everywhere in the chains of hate and dependency".

We can now turn to consider the effects of individual neurotics on society. It has been made clear to us by those who have studied the conditions of industry that an alarmingly large number of persons are repeatedly breaking down in their vocation, and as a result, not of gross physical infirmities, but of infirmities of both mind and body which spring from mental maladjustment.

It is only fair to say that much unhappiness at work and actual breakdown is due to vocational

aptitudes that do not always find their legitimate outlet in an economic society which does not plan for individual happiness. While industries may be established by the individual initiative of a few, the vast mass of employees of all ranks are enlisted without what one might call a mental investigation as to their needs and their aptitudes. The community, therefore, has a distressingly large number of persons who are misfits through no fault of their own, but because, on the whole, the methods of employment are unselective in character. Of this large number many, through reasonable normality and perhaps because of torpor or sheer economic necessity, accept their lot and do not break down, but even in this group there may be a number whose maladjustments pass unnoticed or appear only obliquely. But modern investigators have shown that whereas certain types of work are prone to produce neurotic breakdown, there are numbers of persons who are, for example, accident-prone. There are others who show the clinical signs of neurosis, and these, on closer examination, will give a history of emotional instability and a readiness to break down in the face of stresses which more hardy persons can bear with equanimity.

It is commonly held, or at least was so until recent years, that, given reasonable intelligence and normal health of body, there should be little difficulty for anyone to adapt himself to the needs of everyday economic life. But it has become increasingly clear that possession of intelligence, however necessary in the majority of occupations, is not enough for complete adaptability. Human beings

are characterized by temperamental differences which may colour intellectual output, in speed and rhythm for example. There are differences of temperament which make or mar the power to enter into a given social setting. Some can work in a crowd, others do their best as solitary workers. Some only thrive in work that has variety, others give of their best when the occupation is regular or, as some would call it, monotonous. But apart from these characteristics, which are probably in the main constitutional in character, there are individual differences which result from the life-experiences from childhood onwards. For example, while under all circumstances a reasonable respect for authority is present in average persons, there are a large number of people who resent authority, who are apprehensive in the presence of superiors, and some who are completely paralysed when they are called in for an interview or when they work under the observation of a foreman or an examiner. Some, on the other hand, have no manifest fear of authority but find themselves over-scrupulous at their work, and painfully compelled to repeat a task over and over again in order to make sure that they have not been guilty of sins of omission or of commission. It is obvious from these examples that such persons, while undoubtedly intelligent and possessing a natural aptitude for a particular job or technique, are lacking in something which we must call emotional stability. They become strangely irrational in emotional situations, are poor judges of others, and equally poor judges of themselves. Another type which has been discovered in industry is the restless type of person.

He or she is intermittently anxious, is not under any compulsion to do work conscientiously, but is rather given to work in fits and starts. Their working-lives are punctuated by periods of pressure of activity and periods of torpor, fatigue, and self-criticism. There are others, again, who do not belong to either group, although they may share some of the characteristics of both. These are the suspicious kind, the people who have a constant feeling that others have a down on them, that their work is not appreciated, and that they are passed over for promotion. They blame their chiefs for nepotism and are dissatisfied with every job they occupy. These persons tend to be aloof from their fellow workers, may entertain grandiose ideas of themselves, and, while seeking for work in isolation, blame others for isolating them. Anyone acquainted with the task of vocational guidance, or who practises in a psychological clinic, and particularly those who have the task of welfare workers in industry, know only too well how frequently these persons are to be found in offices, workshops, and in public works. We have still one further group to consider, which has up till recently presented a major problem to industry, and that is the group that is sickness-prone. The number of economic hours that are wasted in industry because of sickness absenteeism is very large indeed. Of these sickness-prone persons the larger proportion are suffering not from physical infirmities of organic origin, but from pseudo-physical disabilities which have been called functional, which means that they are due to emotional stresses which have probably, through the me-

chanism of the sympathetic nervous system, upset the functions of the body, and sometimes of one organ in particular. For example, writer's cramp, telegraphist's cramp, and the like, are now regarded as of neurotic origin. Recent investigation has even shown that rheumatic disorders, while certainly due to infections and to constitutional peculiarities, are precipitated by long-standing emotional disturbances born of discontent and frustration. Miners' nystagmus occurs most frequently in men who have neurotic histories, and even gastric ulcer is not free from incidental mental causation. Time spent on further investigations will certainly go to prove that there are many other illnesses which are occasioned by emotional stresses and which may even terminate in demonstrable organic disease.

Thus we have sufficient evidence to show what effect neurosis can have upon that essential element of modern civilization which is commerce and industry.

Let us therefore for a moment pause to consider not merely the effect that neurosis has upon the actual physical efficiency of the community, that is, upon its economic productiveness, but the effect that neurosis has upon the human side of industry. We can picture with little difficulty the evil effects of a suspicious person upon a commercial enterprise. It is not difficult to imagine that such a person, passing as normal because of his intelligence and his aptitudes, may have a deleterious effect upon the morale of others with whom he works. He will, for example, be secretive and be unable to share his plans. He will be unable to co-operate harmoniously, and his secret megalomania, which he is

battling hard to suppress, may launch a scheme prematurely or paralyse it in the midst of its development. Flamboyant self-assurance in another type of person may involve shareholders in disaster. We have many examples of unstable industrial speculators who, without actual malevolence, pile one scheme upon another in order to save one disaster by the hope of a future success. These people end in the criminal law courts, when their true termination should have been the mental hospital. It would have been interesting to have traced the mental vicissitudes of Ivor Kruger, whose embezzlements and love affairs were inextricably interwoven, producing a heavy brocade of financial and personal intrigue which did much to stifle economic life in many countries, and which played no small part in weakening economic confidence in 1931. The repercussions of such personalities are frequently tragi-comic in their character.

Horatio Bottomley was a considerable influence in his time ; many a widow gave her mite to further his bandy schemes, and not solely because the schemes gave the promise of enrichment, but because his pathological showmanship presented to the world an engaging and irresistible personality. This gallery of psychopathic rascals could be increased indefinitely. It might be said that, after all, such persons are but minor episodes in the history of civilization. They come and go, ruin a number and enrich a few, but the community goes on its way calmly assured of its own intrinsic honesty. But the very fact that such persons occur from time to time and have their following is evidence of the emo-

tional instability of the followers themselves. They merely illustrate how quickly false loyalties can be established, and how much the unconscious mind of persons seeks for such loyalties. Apart from human cupidity upon which such people batten, they tell the tale of the emotional restlessness of human beings and of the underlying neurosis which produces this restlessness.

Society possesses, however, deceptive characters who influence their fellows in an apparently normal way, and others, the neurotics, who are manifestly sick, but it possesses what has been alleged to be an ever-growing number who are not merely social misfits but who are actually injurious to society in minor and major ways. These are the delinquents and criminals who disturb society, either by stealing or embezzling, for example, or who offend against public decency by their sexual abnormalities, or who interfere with the lives of others by violence and murder.

The study of delinquency in both childhood and adult life has opened up a new field of enquiry. It has in the first place made us aware of the social anomalies and economic evils which drive some men to crime. In Soviet Russia, for example, it is held with Marxist conviction that the liquidation of economic inequality brings to an end the criminal tendencies. Equal opportunity to obtain adequate employment and facilities to enjoy the fruits of labour leave men with no desire to batten upon society through irregular methods. Full opportunity to satisfy the basic instinct of sex in free choice of a partner and early marriage obviates

the desire for abnormal sexual indulgence or to seek for economic security through prostitution. Studies in delinquency have certainly substantiated a part of this claim. Juvenile delinquents, for example, have to a large degree developed in impoverished homes where economic insecurity has led to unhappiness and the search for satisfactions through delinquent acts. Amongst adults, a fair proportion have started upon a career of crime during periods of unemployment. If, however, this were the whole truth, all those in economic distress or who live in an impoverished and degrading environment would be numbered amongst the delinquents. Such a conclusion would not only be flagrantly unjust but is actually proved to be untrue. A very high percentage of adult delinquents do not start their life of crime on experiencing economic difficulties. A very large proportion of them started on the path of delinquency in childhood. Some, of course, of these were initiated into delinquency through the poverty of their homes, but it has been found that such homes were broken homes. For example, one or other parent or both were dead, step-parents were either cruel or unacceptable, and furthermore the parents themselves were so maladjusted to one another that the child was stifled in a loveless, irritating atmosphere. The very desire for self-preservation leads many to escape from such homes, and in the escape any means of sustenance and satisfaction brings relief from emotional tension. Even here, however, we witness the operation of more or less social and familial causes for delinquency. There still remains a reason-

able margin of cases in which there are no gross environmental family stresses. In these cases we have to look much deeper for the causes of anti-social behaviour. The more buried or repressed causes of early frustration have to be laid bare before we can understand the reasons for unbalanced behaviour. For example, kleptomania in a wealthy woman can hardly be regarded as due to strong economic needs unsatisfied. In such cases, however, sexual frustrations play a large part. The bewildering variety of sexual offences may have incidental economic causes, but the root is usually found in some oblique development in the sexual life starting in infancy.

All neurotic illnesses are in the nature of social maladjustment, inasmuch as the victim loses to some extent his social usefulness and his powers of co-operation, but in the delinquencies the disorder is so manifestly an insult to social conventions and to social taboos that we are obliged to conclude that civilization does not meet all the conditions which the human mind seems to require, and that somehow a reasonably large number of persons find themselves not retiring into neurosis but coming forward and flying in the face of social taboos.

Still more vital for the well-being of the community and of civilization itself is the existence of the psychology of the masses on the one hand and the psychology of the governing few on the other hand. Social psychologists, such as Tarde and Le Bon, have described the mental attitude of groups. They have shown, by description alone, how human beings acting in the mass are prone to mass emotion

of a primitive kind when intellectual judgment goes into abeyance. Suggestibility and imitation seem to be enhanced. The individual life of the members of the group undergoes a change and is carried away by what some call "the group mind". The members of a group attain to feelings of invincibility and irresponsibility; sentiments spread from one person to another and take on a contagious character, and suggestibility is increased to such an extent that it has all the quality of hypnotic suggestion. The individual, as such, descends the ladder of civilization and exhibits not only the enthusiasm and reckless heroism of a primitive being but his impulsiveness and excessive response to stimuli. Strength and violence are alone respected; to be ruled and dominated is the first desire, and, like all primitive beings, they tend towards an underlying conservatism and traditional type of response, however revolutionary and novel may be the slogans which move them. Although this impulsiveness and suggestibility can be combined with a high degree of heroism and self-denial, intellectual standards are lowered, logical cohesions lost, contradictions are tolerated, and words and symbols carry people away in a flood of satisfying wish-fulfilment and phantasy. This may certainly be the picture of a group in times of panic or when growing resentment cries out for a remedy which only a leader can bring. Is it possible, therefore, that Freud's theory will explain group manifestations even in times of stability? Injustice and a hard life should call for rational remedies, but how rare in the course of human history have people been able to wait long enough for

a rational redress of wrongs? Given a spark of injustice and the inflammable matter wrapped up in the mind of each one of us bursts into flame. Primitive parricide cannot be expiated except through a complex mental mechanism. It calls not only for a potent leader but it must also have something to hate. In identifying yourself with your leader you express your love and his resentment, and you must turn around and look for someone to blame, to kill, or to subordinate. The mass therefore wants its leader and therefore throws him up. In the same way as man made God in his own image, so men make their leaders in times of stress. Genius, said Goethe, is made in the stress of life, talents are cultivated in solitude. Leaders and Messiahs are made in the stressful periods of history ; legislators in the quiet, if monotonous, stretches of calm development.

Finally, we have to consider what psychiatry or medical psychology can do to prevent the stresses which produce the sick society. For we have shown that the sickness of society has its origin in the minds of men. While admitting that man's battle with Nature must produce difficulties and deadlocks, there is little doubt that the passions disclosed in the history of civilization belong to the soul of man and not to his environment. Can scientific mental hygiene legislate for the community, and in particular, can individual psychotherapy do anything appreciable to lift the burden from the hearts of men and rid them, not of the frustrations which the fight with Nature produces from day to day, but of the sense of frustration which we carry with us

from childhood? The Freudian psychology certainly tends to the belief that most of our social forms and culture forms are the result of the frustration of *primaeval* needs which have been brought about by the infant's struggle with its parents. Will therefore a universally applied mental prophylaxis in childhood produce a race which will in the future be free to form the good society which Rousseau hoped for? If our culture forms, our social organizations, and our religions, even our arts, are the result of the sublimation of frustrated instincts, then we can expect that prophylactic measures universally applied over a long period of time will certainly produce a new society, but an unrecognizable one. Some would prefer the unclean picturesque and the romantic to the flat, clean, and utilitarian. Are we to fear that such a perfect sanitation will reduce social life to the level of a well-equipped public lavatory? We really need not concern ourselves with that prospect. All that we know is that civilization is in need of a healing process, and, inasmuch as that process will need a very liberal period of time to achieve its end, our romantics can still sleep comfortably in their beds, only to awaken when the bombs of the next war rouse them to a realization that all is not right with the world.

Perhaps in the long course of the future evolution of the race a catastrophe of the first magnitude will produce our next step forward. Indeed, a former glacial age may have been instrumental in provoking the great Southward trek of the early primate sub-men, and the human horde which emerged produced the first directive push towards social humanity.

But it was not enough : the vast growth of cerebral function tried and failed to outstrip those laggard tissues of the brain which conserve our primitive instincts almost intact. Perhaps the next great cataclysm will produce that necessary change from human societies instinct ridden to the human society in which reason will at long last have achieved autonomy. For only then will neurosis, the child of instinct frustration, be relegated to limbo of diseases which belong to the childhood of the race. To-day we are little more than clever adolescents toying with the intelligence of men yet stirred by the emotions of childhood.

The intellect's feeble defence against the instincts is like a League of Nations catering for gangsters. Yet in that future vision we shall see man not stripped of his instinctual drives, but a creature through whom the new society will enjoy a higher distillate of the vital impulse wedded to the rational will of each individual. How this new and higher synthesis is to be achieved we possess but a glimmering insight.

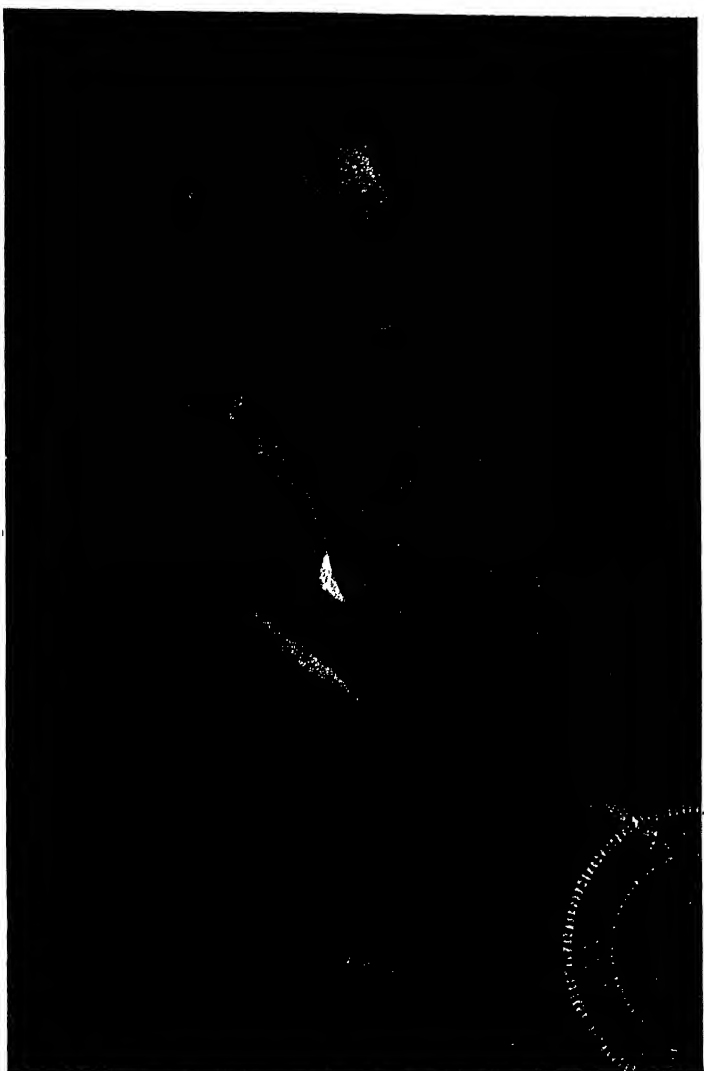
Psychopathologists claim that an analytical education applied universally in childhood will be instrumental in freeing the instinctual life for true reality contacts ; freeing us in fact from those early conflicts which our primitive social formations imposed upon us. But psychopathology must go hand in hand with sociology and the study of man's economic needs. For surely, *au fond*, society, economics, and psychology must be animated by some common laws which can only be discovered by making Human Affairs a unitary study subject to one scientific discipline.

CHAPTER XIV

PRESENT TRENDS IN THE BUILDING OF SOCIETY

It is particularly difficult for our generation to make any exact analysis of modern trends in the development of society. Once we reject the aid of dogma, we find ourselves menaced with uncertainty from two sides. On the one hand, we are faced with a subjective uncertainty which has its roots in the mental climate of our age, and on the other hand, the ambivalence and contrariness of the social forces themselves to-day mean that we can never be sure that any forecast we may evolve is the right one.

The subjective uncertainty in our speculations as to the future of society may be traced to the general discredit into which the efforts of our parents in the last generation have fallen. Our parents never shrank from asserting that, in spite of all difficulties and deviations, the line of human development was definitely set in the direction of reason. But our parents were the direct heirs of the eighteenth century. They believed that they were in the position to break down the prejudices of the past and to subject the hitherto uncontrolled irrational forces of the



PROFESSOR K. MANNHEIM

soul. They were confident that it was only a question of time before the methods of the natural sciences would be applied to society. They attempted to ground their theories of the betterment of man principally on the advance of technical science. Such an assumption finally led to disillusionment. It became ever clearer that industrial technique was only a means and could advance the welfare of man if society as a whole was re-organized to meet this technical progress.

I would venture to say that the leisure which technical improvements have brought in their wake has raised a number of social problems, need for political conflicts, educational readjustments, etc., which sap the energy technique originally set out to save. On the other hand, these very same social and political demands and popular education which are needed in an industrial society have become vital cultural values in themselves as well as urgent problems. They are therefore not to be regarded merely as condign punishment for the benefit technics have heaped upon us : they bear positive values. That technical improvements demand sacrifices is here formally acknowledged ; such innovations are always combined (even in primitive society) with the complication of the social organism. The inevitable burdens which thereby ensue were always imposed on certain classes (in patriarchal societies in their primitive stages on the woman or the slaves and half-slaves). In our society the unemployed, in the first place, are the scapegoats of a society which is unable to incorporate technical progress into its general social framework. For

mechanical progress in itself does not signify social progress. Only when society is totally re-organized, economically and psychologically, and can keep pace with the advance of the machine, is continuous improvement in the social organism possible.

Two symbolic phenomena have brought home with overwhelming force this truth to the lay mind.

First, the paradox of limitless technical progress followed by the millions of unemployed; and secondly, the notorious instance of wholesale destruction of wheat to prevent a fall in prices. The necessity for such vigorous measures was the direct result of the advance in agricultural methods. Both these facts have worked symbolically on the lay mind, for they demonstrate in concrete vivid terms the unbridged gaps in the development of technical progress and the social system. The technical optimist is thus invariably led to scepticism unless he learns to think sociologically,

Society ably directed and controlled must aim from the very start at distributing equally over the whole community the burdens which continuous technical improvements inevitably entail. As long as society introduces the necessary technical innovations without previous planning and without compensating unavoidable maladjustments by corresponding readjustments, functional disturbances will always accumulate. Such disturbances have the tendency to fall very heavily on those classes of society which politically and economically are the weakest. Only those who are in a position to think of the effects technical progress will have on

given social systems can arrive ultimately at any rational conclusion.

That intellectuals of our generation have lost faith in progress may be largely attributed to their unwillingness to think along these lines. They will not apply the laws of cause and effect which they accept in technical and economic phenomena to their general conception of society. We observe from day to day the most thoroughgoing rationalist in technical and economic matters thinking irrationally when he comes to consider society as a whole. He yields all too easily, partly out of a sort of natural tedium and partly because of certain social complexes which still operate in the unconscious mind. It is no lack of intellect but rather a lack of will on the part of the individual who hesitates to apply the accepted laws of cause and effect to the organization of society.

Efforts must therefore not be spared to influence man to think ahead, to maintain the courage and sense of adventure which have been so successfully used in the realms of science for the welfare of society. Our inability on the subjective side to determine future trends is due to the break-up of our belief that the progress of science would act as a solvent of social ills. The inability to distinguish and explore to the end sociological laws of causality on lines similar to the sciences, has conspired to bring about this widespread disappointment.

Besides these subjective causes for the decline of confidence, we must now turn to the objective causes. It becomes increasingly clear how difficult it is to establish present trends in society when develop-

ments grow ever more confused and chaotic. Indeed, we cannot but come to the conclusion that there are just as many destructive as constructive forces at work in modern society when we observe the colossal shifts in the basis of the population, the deplorable prevention of free migration—the only guarantee of even development—the creation of armies of unemployed in the old industrial countries through the gradual industrialization of the rest of the world, and the diversion of these armies into war industry to give them employment. This highly inflammable human material only awaits the spark which, even if it fails to set off the explosion, produces such a general social insecurity that even the remaining stable communities find themselves forced to join the rest as fully developed war economies.

We undergo the same experience when we scrutinize the powerful disintegrating processes within the social body. Since the Great War it has become evident even to the lay person how the family is losing its educational and social function for increasingly large sections of society ; how the spiritual life which formerly held sway among the masses through community organizations is fast slipping from them ; how large churches, to instance those in Germany, have been disintegrating with almost mocking ease in spite of their supposed deep-rooted traditionalism ; and how the modern man is more given to the commercial grind of sensationalisms, sponsored by an all-powerful technique of "time-killing", than to the old forms of social conviviality. The ethical standards of the past no longer fit in with the changed tempo of modern

living. In fact modern man is losing his faith not only in ethical rules but in all other rules. Likewise we observe the same disintegrating tendencies in his thinking processes. This is to be seen in the lack of any constructive world outlook not only in the ordinary man but even in the intellectual, so that the art of "muddling through" has become a glorified virtue which, in more solidly established societies, would have been considered the hall-mark of an idiot's lack of grace.

If we assemble these and many other trends still unenumerated as they exist in our society, their interpretation remains problematic. Are they symptoms of universal collapse, a prelude to the organized plunder of State capitalism, directed by a privileged gangsterdom? Or, are they the birth-pangs of a new society which is to rise new-born from the ashes of the old like the legendary phoenix?

Not independently of the above trends, but actually in response to this disintegration, there has appeared a new factor in the social play of forces which, on account of its far-reaching consequences, will be treated with special emphasis. I refer to the emergence of a new social technique; by this I mean the increasingly conscious manipulation of the human impulses, thoughts, and reactions of the masses. Society hitherto was founded on a fixed and limited possibility of influencing human conduct. Home upbringing, conventions, schooling and church, organs for the formation of public opinion, have all in their several ways shared in moulding a type of man in accordance with definite ideals. But these influences were of an apprentice-

ship nature. Their methods were mostly founded on empiric rules, which they applied unconsciously. They were traditionally transmitted from one generation to another with little modification. That they were effective is to be attributed to the slow development of traditional societies. In such societies, based on limited economic expansion, the cultural and educational methods of the family, the supreme exemplary concepts of the Church, the public *mores* had time enough to develop and mould, rightly or wrongly, types of men consistently traditional, whose patterns of behaviour and thought were sufficiently homogeneous and dependable for general purposes. At the same time they were elastic enough to allow the individual personal freedom in adapting himself to his surroundings. Thus the older society and its general delineaments was of a homespun order : it corresponded to the apprentice stage in the state-craft of moulding citizens. That it prospered is due partly to the relatively slow transformation of society. For this society plodded on with scant mobility. Man spent his days in those groups for which he was reared. The conflict between the natural limitations of tradition in its cultural outlook with other rapid transformations was still too unknown to society for it to create a problem.

The age of liberalism which follows the age of traditionalism creates far-reaching dynamic changes in the social fabric but maintains the illusion of the applicability of the form and formulae of earlier societies. First, because the impulse for expansion was directed by a relatively small class : only the entrepreneurs, the intellectuals, and a part of the

bureaucracy participated actively in these changes. Correspondingly their intellectual ferment ripened into the rationalism and romanticism of the nineteenth century, the first symptoms of the disruption of traditional forms. Secondly, the spiritual and economic disturbances in the general equilibrium were not all too disruptive at this stage, as they were concerned with the conflict, competition, and expansion of far smaller social units. Moreover, they were incorporated into society without overmuch friction. The individual schemers, the intellectual reformers among the new enlightened class, sooner or later found their place in society. The traditional social and spiritual structure is still capable of absorbing into itself these more expansive elements.

Now it is abundantly clear that when we consider in all their cumulative effect the colossal, breath-taking changes to which the present age gives ample testimony, it is not surprising that the traditional mode of moulding character and mind was not found adequate. Modern societies are conceived on huge unprecedented scales, shaping the destiny of man with sweeping efficiency. We note the hundreds of thousands driven from one place to another in obedience to the laws of the labour market: more structural changes occur in society in a year than formerly in a generation; at the same time the individual is now exposed to more new stimuli in one year than formerly in a decade. Even the ordinary man reads the newspapers, assimilates impressions of different *milieus*, and is presented in the contemporary world-scene with a far greater variety of experiences than perhaps a

Christian Knight in his first contacts with the Orient. In such a world the old social technique cannot work effectively : it belongs to a stage of development as advanced as, say, the small retail business. Just as the latter can give satisfaction only to a limited custom, so the old methods of moulding the individual can satisfy only the needs of a small social space-unit.

It is therefore not astonishing that those nations who suffered the problem of modern mass society to operate for the first time with full dynamic force on their own systems, were compelled to exercise every effort towards evolving a technique for the mass control of human reactions.

Apart from the Middle Ages, when the Church may be considered as an institution for the mass control of man's emotions and thoughts (though of course she left much to tradition and did not rationalize her methods into a science), the army of absolute States was the first great institution of large-scale control. The physical needs of these battalions were rationally organized ; scientific methods were evolved to bring large masses, assembled chiefly from the lower classes, to work in reliable unison and to provide them wherever possible with prescribed attitudes.

The army of the absolute State has fashioned social psychological patterns of obedience and loyalty, which have since appeared on the surface intermittently whenever one could do without concealing the powers of compulsion. Thus, particularly in times of crises (as was the case in Germany), wherever democratic forms failed to function, the patterns

of social organization as represented by the Prussian army would time and again show themselves more reliable than all other methods for the integration of society. However, an authoritative militarism even in a mass society was, in the end, not the most convenient. Its too strong undercurrent of power, its marked aggressive front, admits only a minimum of self-adjustment to society and therefore demands wide bureaucratic powers of organization, control, and espionage. Moreover, its over-centralized spirit, its method of mass control conceived along the lines of discipline, stunts especially the healthy pioneering spirit of expansion present in society. For that reason these methods used for the mass direction of human energy and conduct as developed in the American structure of society were of more lasting success than, say, a mere military integration. It was, in the first place, the American art of mass propaganda adopted in a period of expansion for electioneering purposes, and also applied to general social life, that illustrated a number of psychological rules and thus gave birth to the democratic model of mass influence. That conditions in America should be especially responsible for the early existence of this democratic form of mass influence may be accounted for by a number of special reasons. The absence of feudalism in America has, from the very beginning, limited the power of territorial traditions and customs. They could not be counted on, and they could easily be broken if and when they arose. The "frontier situation" had from the start set large areas at man's disposal, and the great influx of immigrants of all

nationalities thrust the problem of "Americanization" to the front as a mass-psychological one. This had to be thrashed out democratically not only because there was no efficient central power at hand, but also because the immigrants were just those men from other lands who possessed the lion's share of spontaneity and initiative.

Since this technique of mass control emerged from a democratic country, its main concern was not to create, by dictatorial methods, something from nothing, but rather to intensify and integrate already existing tendencies in accordance with some declared purpose. This knowledge of the practical management of mass impulses in a highly fluid and mobile society such as America at that time, was then smuggled into Russian propaganda and enlightenment and became the corner-stone in the edifice of an absolute régime. The differences in its application were immense. The Americans aimed at counteracting the evil effects of an excessive social mobility in a restless society in which the influences of home and community were easily nullified. On the other hand, the Russian dictatorship was obliged to transform peasant masses in an incredibly short time into an industrial proletariat, who were not only to be adequately reliable for industrial work but were to be equipped with a rationalistic world-outlook, indispensable to the preservation of an industrially planned State. Whilst American propaganda was at pains to solve the problem of how to bring traditionless masses, unhomogeneously constituted, to think and act uniformly at elections and on other occasions, the

Russian advanced one step further. From the mere emotional compulsion of great human masses at given moments, it set itself the problem of re-furnishing the intellect, of making man ideologically fit for a new society. This could not, of course, be put to effect by emotional propaganda only, based on shrewd psychological calculation in drawing the masses : there were other methods to be used by totalitarian States. Beside the propaganda machine was placed the huge educational apparatus, and behind this forced one-way trafficking of the mind by propaganda and schooling loomed the heavy hand of despotic pressure. Thus from crèche to kindergarten, from school to university, everything was to conform to an ideological pattern, to a uniformity of outlook. Even such places outside the walls of learning as the workers' club, sport centres, the press, etc., were all to be regimented for the furtherance of these ideals. By this we see to what a fine art the technique of propaganda was reduced. It is not only more scientifically worked out in its methods than our traditional schools, churches, and national organizations, working blindly with an inherited routine of vague popular psychology with very uncertain aims, but it is also more effective because it is a co-ordinated whole, with none of its institutions at cross-purposes.

In our traditional society the Church as the religious sect mostly worked apart from the State school and was very often independent of political direction. The consequence of this arrangement was that both school and university tended to counteract the influences which Church or sect promoted. Moreover,

such influences were further weakened by "life itself" with its competitive struggle and its sanction of egoistic impulses. Thus, considered from the point of view of formal efficiency every liberal State ultimately dissipated much of its energies: what it attempted to build in one place was destroyed in another. Only by the co-ordination of all directive influences was the saving of an endless amount of energy possible. The Russian State has made practical reality of this idea of a totalitarian, co-ordinated technique of society. Due to the all-power of the State, they have brought to its highest peak by means of this technique a general rationalization of the whole sphere of human influence. This tendency to greater efficiency can be studied on its merits without losing sight of the great price they have paid for it.

The assemblage within a unified plan of all means whether political or social for the achievement of such a technique of society, has been the great *novum* which modern mass society has produced. In relation to this, the so-called technical improvements of the means of communication are of only secondary importance although not inessential. The great mechanical agents of public opinion, such as the radio, telephone, telegram, and the gutter press which were discovered in the same period, actually only facilitate mechanically that which the new spirit compels and demands—the will to organize on a huge scale the whole realm of human influence.

This large-scale technique of society aiming at a general social quality has been taken over direct

from Russia by the Italian and German brands of Fascism. They adopted this technique without accepting the ideological part of it. They too have penetrated into the school ; they too manage their effects by all the acts of propaganda. But they are unable to use this mass-influencing technique for the production of pure constructive work for one simple reason. The Russian system of industrial expansion and socialization, sponsored by an ideology of work and equal opportunity, gives its citizens scope for rational thinking (though of course even in this society many intellectual taboos exist), whilst Fascism in all the decisive points of its social and economic outlook must be irrational and emotionalistic. For its social system does not resolve but only conceals the economic difficulties of modern society.

However, in one respect even the Fascist States are superior to present-day democracies. They do attempt to solve in response to the especially difficult internal circumstances and crises of their countries the psychological problem of the masses, as, for example, the problem of mass unemployment. Fascism, as yet, has not been able to establish an economic system in which prosperity could be brought to life without the aid of the armament industry. Still less has it been able to effect a permanent raising of the standard of living : quite the contrary ; economically it is moving backwards. But it does at least seek, although with the most brutal of psychological methods, to take firm hold of a society with persistent unemployment. Its peculiar brand of statecraft certainly robs the

masses of all enlightenment and appeals to their most primitive instincts, but none the less even in this distorted form it occupies itself with problems which will present themselves to every mass society of the future. It is at this juncture that liberal and democratic mass States, finding themselves in comparative prosperity, threaten to lag behind. For even these States are subject to structural unemployment which, to all appearances, they will retain as long as the tempo of world industrialization continues. They have so far not acquired the necessary understanding of the psychological redress for great social problems, for in their tolerable conditions of living the difficulties of such problems are easily minimized by those who are comfortably placed. The Fascist workers' camp is indeed an unpleasant solution to the psychic crises to which the permanently unemployed is subject; but, from a social point of view, it is a far better effort than the liberal handling of this problem. The giving of the dole does not, as many suppose, ease the psychological problem of the workless.

Moreover, the middle-class Englishman is still only very remotely aware that he is already living in a mass society. He does not yet see the tangible symptoms of mass life in his own country. This is due no doubt to the restricted social mobility of the country in which he lives, where the traditional forms of upbringing from puritanical home to public school and university are allowed to function with relatively little friction. Again, the existence of the empire, which offered so far intermittently economic and social outlets for internal difficulties, has for

long shrouded the numerous symptoms of social sickness that are manifest evidence of a mass society. He does not yet see the tangible symptoms of mass life in his own country. This does not signify that the necessity for solving the problems of such a society will eventually be spared him. But being in a specially favourable position, he is able to realize these problems gradually and to effect the changes necessary from individual, indiscriminate effort to all-embracing collective effort. Such marking of time makes it perhaps possible for him so to select and arrange his means that the maximum amount of good, proved by a process of trial and error, may be achieved. In countries like England that have not yet abolished their liberal and democratic institutions and still wish to cling to them even when a new system of society of mass dimensions gives rise to unprecedented problems, the following considerations are important.

One should not, when dealing with this new social technique, adduce the senseless argument which regards this technique as a mere instrument of mass propaganda by the aid of which another minority culture can be ruthlessly upheld ; a minority culture in which the exclusive goal is to produce a few distinct individuals on the one hand and large stupid masses on the other. This modern technique of society is a life-and-death necessity : it is as vital for its treatment of the psyche as the development of economic science is for the social development of society. To condemn it is not to dismiss it from society but to let it rule blindly and dangerously. This social technique is as much a science as

economics. Both have their grandiose characteristics. In that it solves difficulties so formidable that one would have believed them insuperable, it is certainly grandiose. One only needs to imagine how a mass society would be in all its planlessness and chaos, were it not in the position to reorganize a comprehensive system of mass influence. This system therefore is a deliverance, if only of a preliminary nature. Moreover, like any other technique, it is neither good nor bad in itself but bears fruit only in so far as it serves the social order. If one wishes to observe its positive might, one may turn to Germany, whose rulers were able for political reasons to divert the German's deep-rooted hatred of the Pole by means of this modern technique of society. From this it is not to be assumed that from now on the German was any the fonder of the Pole. What is for us especially important from a sociological standpoint is the knowledge that it is possible, through this modern technique of society, so to direct attitudes of hate that they are rendered politically ineffectual because they are not allowed to become a social weapon. One can imagine the general easing of human relationships that would ensue were this technique of society, commanding such supreme power, to be applied as widely and as consistently for the commonweal as it is now used to stir up conflict artificially ; or, expressed in different terms, if only those in high responsible places would use their powers in the interest of peace, and work in a grand effort to re-shape fundamental attitudes, and not as an instrument of war and hate !

It is therefore wrong to assume that this social

technique is in itself good or bad. Like any other technique, its use for good or ill depends on the way society chooses to use it. Moreover there is another aspect to be considered. This selfsame technique which still continues to operate with the empirical rules born of a mass society, working on a psychology, indiscriminately used by the agitator, officer, or sales-manager of a large business concern, has not even yet reached the last refinements of a broad rational conception of mass influence. Mass psychology, as it is conceived by the propagandist and sales-manager, works on an exceedingly one-sided concept of efficiency and on a superficial psychological analysis of human potentialities. Side by side with this psychology of mass control, there is emerging as a science a far finer sociological psychology which in its ultimate results has not yet been evaluated. I refer to the immense progress which psychology and sociology, in conjunction with modern social service work, have made in juvenile courts. I refer to those attempts known in behaviourism as reconditioning and to the new problems of re-educating adults. I refer to the investigations which consider man's inferior reactions as soon as he is concerned with political matters, not so much as symptoms of his ineptitude but rather as an expression of his arrested development in these fields. Moreover the application of psychopathology in the sphere of politics is one path to the understanding of many hitherto obscure social phenomena. Last but not least in importance are the observations which psychology has brought to light in connection with the workings of

the unconscious mind. In spite of their problematical results, these observations open up new vistas of control.

One cannot imagine to what lengths this social technique could be used in the shaping of a new destiny for man. But it must be conceived not in the sense of a few tried-out empirical rules handled with success by propagandist and agitator, but as the sum-total of effort on the part of psychologist, social service worker, and sociologist towards the transformation of man. Even if such co-ordination of attack on the transformation of man were to succeed, however, the aim which society sets itself will always remain the most decisive factor. For it is society in the end which is the final arbiter : whether it is to pursue a policy based on principles of conflict, war, and plunder, or on co-operation and work.

To invest this technique of society with ennobling qualities, with powers to re-educate in infinite measure, should be the aim of society. To consider this technique of society merely as a means of playing skilfully on public feelings, of inflaming the passion of a delinquent mob by a process of subtle excitation, is to understand it superficially. Its potentialities are larger and should be apprehended with greater knowledge. Its one rightful aim is to integrate the fleeting emotions and the psychological nature of man for purposes of re-education on a large scale. Only psychology and sociology can truly elevate it from the mere grind of the propaganda machine to the grand efforts of collective re-education.

Only when one takes this aspect into considera-

tion does one grasp the full extent of its powers and possibilities. Moreover the argument advanced against this technique, that it tends to create the herd mind, is certainly unjustified. The widely held notion that this technique can cultivate a standardized Fascist type of man in one place and Communist type in another is but a distortion of what it can really achieve. When really understood, this technique, which essentially is the co-ordination of all psychological methods of influence, does not necessarily involve the production of either type. What this technique can rightfully claim to do is to co-ordinate all those influences which family, school, clubs, press, and all the other social agencies generate in haphazard and in contradictory fashion to-day, for the purposes of producing individualism of the highest order. This would be achieved by enabling these different institutions to develop harmoniously the different aspects of personality. It is a Fascist-Communist misconception to construe planning as a process of levelling out and as being a means making exclusively for conformity. Such an identification betrays a primitive concept of planning : it is a concept held by the dogmatism of the *petit bourgeois* turned revolutionary who, for the sake of a rigid opinion, loses the sense of the necessity for differentiation. Nothing therefore is more vital than to prepare the ground for the assimilation of the following truths :

(1) In a mass society, planless dissipation of social forces does not bring freedom but chaos. Unchecked liberalism in a mass age leads to chaos. Hence the necessity of some form of mass control.

(2) From this chaos grows the reaction—the will to manage these mass forces by violence. This will to plan is soon identified with mass enslavement and a process of levelling out.

From the first point we note the necessity of mass control. A planned social policy becomes inevitable. The question to be answered is: To what purposes will this technique of mass control be applied? Will it be used to effect a transition from mass conditioning to an humanitarian re-education of man? or will it lead to the mass enslavement of mankind? It becomes vitally important which of the two paths rulers of States will choose.

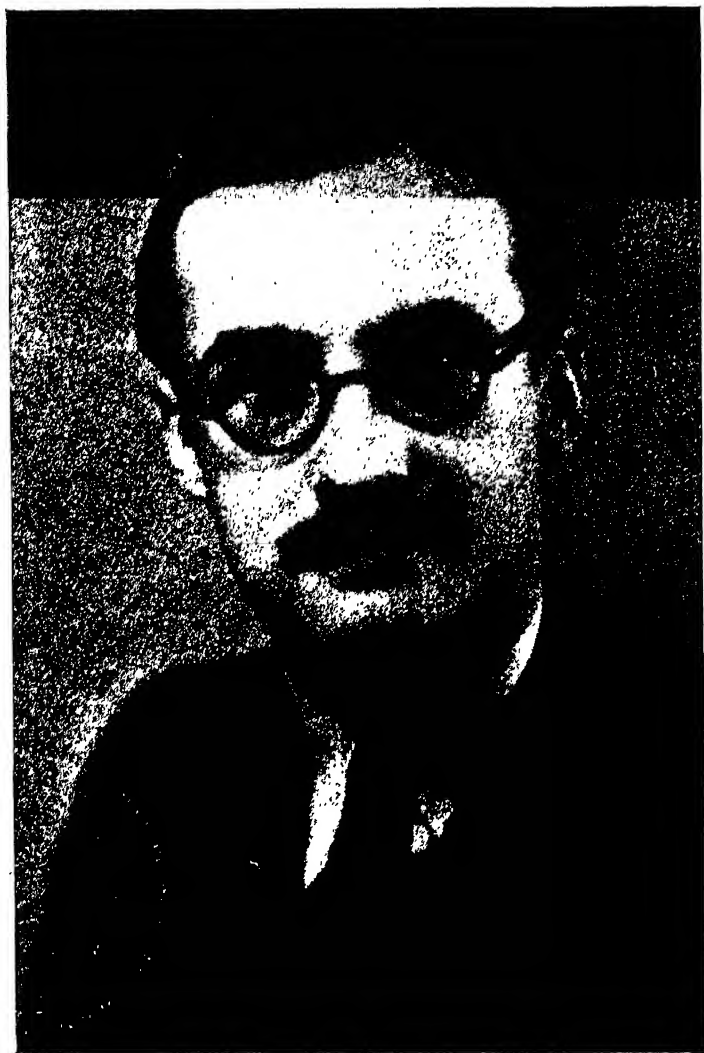
(3) For those reasons I believe that the task of those countries with marked liberal-democratic traditions in the present age of mass society is not to utilize their liberal traditions in order to evade the problem of the necessity of mass conditioning, but promptly to separate from the concept of co-ordination such ideas as levelling that have confused the general understanding of planning. Liberal traditions need not serve to obscure the new problems of our time and to refuse the use of new social techniques as long as they may serve their purposes. The true function of the Liberals in our age of a new collectivism is rather to emphasize those possibilities inherent in new conditions and new techniques which otherwise would be concealed from the ordinary equalitarian.

Co-ordination signifies a preconceived utilization of all means that stand at one's disposal without committing oneself to definite ends. Its aims should be to effect by degrees a transition from collective

uniformity to a differentiated individualism *en masse* by a process of re-education. At this juncture we might remember that one cannot build society without a certain amount of conformity and that even the individualism of the Liberal era could only be built up on the substratum of conformity which previous community-cultures had laboriously laid out. Individualization is only sound where it reflects differentiations or variations from a communal norm and is not built on air. Instead of the old traditional conformity which is now on the point of dissolution, a new one must be built in the near future at a considerable cost of energy. Once again we shall discover values which eluded us in an age of unlimited competition: values of identification with other members of the community, values of collective responsibility and its consequent impositions. Once this solidarity and conformity is assured among great numbers, there is no reason whatever why a process of differentiation should not arise out of this commonalty. Why should there not arise in the individual, over and above his inevitable substratum of conformity, personal refinements of attitude? Why should there not arise a class of individualistic-thinking men who could live side by side without friction with those sunk in the broad levels of conformity. To apply this social technique of mass management to the conception of a new individualism by consciously providing the scope of free development within the matrix of conformity is possible in a society in which traditions of individualism are sufficiently powerful to hold the rising collectivism in check. This second step in

the development of society can only succeed when it is undertaken with conscious foreknowledge, and not out of the mere hazards of despair. Furthermore, it is necessary that this transition should follow closely the spontaneous movement of the masses. At the same time, however, this transition must be directed by groups with determined political will, equipped with the necessary psychological and sociological knowledge. On no account must such important measures be handed over to desperado officers, army agitators, and radio chiefs.

A last word may be added with regard to my purpose in this chapter. Far removed from my intention is any deliberate provocation to propaganda. The desideratum in my view is a reasoned planning in the direction of social techniques, so clearly a necessity of the time, and further that these techniques should be in terms of the human sciences, incorporating all the most enlightened values of our age.



THE EARL OF LISTOWEL

CHAPTER XV

SCIENCE AND LEGISLATION

The contribution which science can make to politics is to show us dispassionately the facts revealed by the various departments of science which are relevant to political problems, to show what means are available for attaining different ends. . . .
—LEONARD WOOLF in the *Political Quarterly*, Oct.–Dec. 1936.

No more appropriate starting-point for a discussion of the relationship between science and legislation could, I think, be found than some words written by Mr. Leonard Woolf in the course of a review of two books, one by Dr. Glover and the other by Professor Hogben, recommending, respectively, psycho-analysis and social biology as the panacea of those grave maladies affecting millions of lives from which our social system now suffers. Is knowledge the talisman that banishes poverty and pain? Or is it merely, like the gift of life and the unqualified blessing of robust health, an instrument that can serve equally as the ministering angel of divine mercy or the scarlet emissary of Antichrist? Such, surely, are the questions to be answered before we can put the sciences in their rightful place.

And in our capacity as philosophers—because, consciously or unconsciously, we are all philo-

sophers, ploughing our little furrow in the shape of *some* philosophy of life—we are bound to negative the first of those questions and to answer the second with an emphatic “yes”. What professional philosophers, with their academic taste for twisting common words into new meanings, call the “values” or ultimate “ends” of human existence, those tacit assumptions behind the mass movements of history and those explicit ambitions that have been the lodestar of dedicated lives, they, surely, were the product of something more compulsive than reason—of a sense of duty, of religion, or, more often, of a blind biological urge.

With the growth of a world civilization that rescued him from the pangs of want, the agony of thirst, and the haunting fear of sudden death, *Homo sapiens* was able to lift his motives from the unconscious level to full consciousness, and to replace his bodily cravings by a spiritual hunger for justice, and beauty, and objective truth. In the growth of society, as it radiated in ever-widening circles from the primitive tribe, knowledge played its part, for better or for worse; it revolutionized the habits of man by means of the printing press, the internal combustion engine, steam and electrical power, and, thanks to the fantastic speed at which high explosives and poisonous fumes could be transported through the air, it rendered his tenure of life more precarious than it had ever been before. But the business and social inventiveness of the rational faculty was always a servant and never a master; new forms of government, new methods of production and destruction, these were the out-

ward expression of those inescapable biological impulsions whose unswerving current sweeps forward the generations.

In no country has science obtained hitherto the place of honour it now occupies in the social structure of the Soviet Union ; never before has any government financed laboratories for research on so lavish a scale ; never before has so large a proportion of the curriculum at schools and universities been devoted to the natural sciences ; never before has the entire population of a great European Power been invited to substitute the scientific for the religious conception of man's place in Nature and of his relation to the universe. Yet this unprecedented impetus to science among our contemporaries has been given by material need in alliance with a new thaumaturgy, with yet another product of the myth-making faculty ! " Rescue us from our unutterable misery ! " is the cry of a hundred million peasants whose lives have been one long effort to steel their bodies against frost, and famine, and disease ; the mechanization of agriculture, the industrialization of the towns, the transformation of the rags of poverty into the cornucopia of abundance, such is the primary function of science in the Soviet Union. But man does not live by bread alone ; and the scientific aspirations of the new order are woven into the orthodox creed of dialectical materialism, a curious, pseudo-scientific hotch-potch of history and economics served up in the jargon of Hegelian logic.

The upshot of this historical argument is that the scientific understanding of man and Nature has

always been, and is therefore likely to remain, the slave of the ideal or material interests prompting the sovereign governmental authority in any society. Knowledge is an essential accessory of statesmanship, a compass to steer the ship of State towards the haven for which its sails are spread ; but the direction in which it is moving, and the speed at which it travels, are determined by individual and social forces which knowledge alone cannot as yet appreciably influence or control. Brute facts remain neutral in the ceaseless conflict between progress and reaction, between war and peace, between a worse barbarism and a higher civilization ; they illuminate the path of the bellicose dictatorship just as clearly as that of the pacific democracy. The first prayer of the would-be legislator should be for a clear, enlightened vision of the kind of society his speeches, arguments, and political decisions are calculated to conjure into being. What is the proper function of the State ? Is it, as the nineteenth-century Liberals believed, merely the vigilant Cerberus watching over life and property ? Or is it besides, as it has become in modern practice, a means of ironing out the worst inequalities caused by the concentration of capital in the hands of an insignificant fraction of the community ? Should the individual immolate himself as a means to the glorification of the State, the way of all dictatorships where blind obedience is the sovereign virtue ? Or is the individual citizen himself the final end to which the whole machinery of government should be instrumental and subordinate ?

These are not questions of exact measurement

such as science can formulate, but of inward conviction and appreciation expressed in political theory ; and if the last is answered in an affirmative and democratic sense, then the further problem of what constitutes the good personal life which legislation serves to promote immediately arises. Here, again, we turn for guidance, not to science, but to the beating of our own hearts and to those great books of poetry, philosophy, and religion in which the finest of men have recorded what life could give in its highest, and happiest, and most vivid moments. The sixth book of Plato's *Republic*, the thirteenth chapter of St. Paul's first letter to the people of Corinth, the Sermon preached by Jesus on the Mount—such brief communications as these are a better training-ground for those who would direct the affairs of nations than all the voluminous writings of an Einstein, a Pavlov, or a Freud.

This lengthy prelude is, I think, warranted by the need for ascertaining, in the first place, what sort of weapon science can supply for the armoury of the legislator. The ends of legislation and government are laid down, for better or for worse, by the moral temper of a people and of those whom it chooses or tolerates in positions of political authority ; scientific knowledge, if it cannot check the downhill course towards greater tyranny or injustice, can, at least, provide the most effective means of carrying into effect, through some detailed programme of legislative action, those broad tendencies of policy sanctioned by public opinion. There is general resentment of and indignation against the compulsory unemployment of able-bodied men ; there is a strong

feeling that the families of the poor should not be herded together like cattle in squalid slums ; the majority is uncomfortable that half the population of a prosperous country should be less adequately nourished than the lapdogs of the wealthy ; and practically everyone, in Great Britain at any rate, has a passionate longing for peace. Very well ; the next step is to ask of science how a government can set about diminishing unemployment, how it is to provide decent homes for the poorest families, how it can put an end to the semi-starvation of twenty millions of those it represents, what policy it should pursue if Europe is to be saved from a catastrophe worse than the World War.

At this point the inadequacy of pure goodwill becomes as plain as daylight ; honesty and disinterestedness alone may be enough to paint the halo of a saint, but they cannot suffice to turn out the diligent citizen or the intelligent legislator. For the solution of these major problems of domestic and foreign policy has to be worked out in terms of an economic system that requires readjustment to meet the most pressing of human needs, and in terms of international relationships that have to be harmonized if they are not to be snapped and severed by the strain of divergent national interests. It is idle, therefore, to quarrel as to whether egoism or folly is the more radically anti-social of vices, and the wise man will struggle as assiduously against his ignorance, his prejudices, and his inexperience, as against the slow poison of mean ambitions, class interests, or jingoistic patriotism. I imagine that, compared with the practice of elected bodies in other

countries, and with that of our own ancestors in the days when Walpole could claim that he knew the price of every M.P., the standard of probity in British public life is fairly high ; bribery and corruption, log-rolling, nepotism, the use of official knowledge for private gain, are absent as a general rule from the lobbies of Westminster even if they may sometimes infect the offices of some obscurer town halls. But let us not be blinded by self-righteousness into forgetting that the personal standards set by a private conscience differ from conventional honesty as gold from clay.

The reason for making these comparisons is in order to emphasize the extraordinarily low level of political information in positions of authority and responsibility ; let me at once disclaim any shade of censure that these words may suggest by explaining that I mean accurate knowledge of social and economic conditions rather than brain capacity, and that I regard the guilt for this unhappy state of affairs as being rightly ascribed to our social system as a whole rather than to individual politicians. It must cause astonishment to any impartial observer when he notices that every profession in the country, whether military or civil, requires of its recruits a considerable period of apprenticeship and study before they can be admitted as fully-fledged officers, doctors, or barristers,—save only that profession which holds in its hands the lives and the happiness of the whole community, the profession of politics. The one necessary and indispensable qualification for a candidate at a Parliamentary Election is enough cash to pay for, or to contribute substantially

towards, his election expenses. The result of substituting a pecuniary for an intellectual standard for the budding legislator has a distinctly depressing effect on the level of political debate. Lord X., eldest son of the Earl of Y., may be a thoroughly popular fellow and a first-class shot, but the mere fact that in his family eldest sons have always taken to politics, just as they might have taken to racing or to drink, barely justifies his constituents in returning him to the Conservative Benches at Westminster. Old Z., generally known as "the tin-tack king", made a vast fortune by cornering the supply of these inestimable household commodities; then, with one eye on a peerage and the other on the Socialist Menace, he decided to give up business and stand for Parliament. He promised his supporters, many of them unemployed cotton spinners, that he would hold what he had. A big Trade Union was getting a little worried, not to say seriously flustered, about its venerable Secretary; years were beginning to tell, and neither his industry nor his memory was quite what it used to be in the good old days before the war. But ingratitude is a vice of hard-boiled capitalists, and an old servant of the Union cannot be cast on the scrap-heap like a worn-out machine. No, he shall enjoy to the end of his days the most delightful of all sinecures; a seat in the House of Commons, with an honoured place in the public eye, a State pension of £600 a year, and opportunities for obtaining booze at the Palace of Westminster not restricted, as in those puritanical pubs, to the early and less glamorous hours of the night.

But money not only admits stupidity and sloth ; it also shuts out real talent and brains. I could name two or three of the most brilliant and enlightened men I have ever struck who have always had to fight hopeless constituencies because they lacked the support of private resources or of a wealthy organization that could put down the cash. For society does not reward pure intelligence as it rewards the hustling go-getter in business, and the scholar, the professor, or the student, burning his midnight oil over fascinating problems of scientific research, must find in his own unsullied conscience that glow of highest satisfaction that the world's second-rate favourites cannot faintly savour. Socrates, had he been born in London instead of at Athens, Saint Francis, had his home town been Birmingham instead of Assisi, would surely have found the doors of Westminster hermetically sealed against their knocking. Yet few would deny that such men as these are best qualified to shape the destiny of nations by making themselves the champions of benevolent laws that truly promote the best interests of the majority among their compatriots. The scientific temper in politics would banish the fanaticism and arrogance of Party zealots, transforming the blaze of passionate propaganda into a cool grotto where people would humbly investigate economic facts and social conditions ; it would render the politician sufficiently uncertain about his own conclusions to respect the honest convictions of those with whom he differs. I am not suggesting for a minute that politics in this country have sunk to the level at which they stand in certain parts of

the United States, where they have come to be regarded as a happy, if somewhat shady, hunting-ground for the laggards and failures in business; what I do suggest, and lament, is that men whose scientific detachment and superior knowledge fit them so admirably for public service should be debarred by financial considerations from putting their whole energy at the disposal of the community.

There are certain branches of modern science whose investigations are just as enlightening for those who concern themselves with the diagnosis and aspire to prescribe the cure of maladies affecting social bodies, as are those of anatomy, physiology, and medicine for such as would make it their business to preserve normal physical health and to banish disease. These are what may be termed the human as distinguished from the natural sciences, and they study man as an individual or as a social being, instead of exploring the vast field of inanimate Nature covered by chemistry and physics. They differ both in the character and quality of the facts from which they generalize, and according to their degree of importance in furnishing an explanation of, and hinting at a solution for, the problems confronting the legislator in the twentieth century. It is the purpose of this book to survey, in a necessarily cursory fashion, all the sciences that contribute to human welfare; mine is the humbler ambition of discussing, in a special order dictated by their practical significance, those that are, or should be, the main props of sound legislation. At the head of this little band of sciences there stands, unchallenged in the place of leadership, "the dismal science" of

Carlyle, that tedious but vital storehouse of knowledge known to university students as political economy.

For the main domestic problems confronting the legislator of to-day, in this country at least, are problems created by the cash nexus, by the peculiar relations existing between capital and labour, between industry and finance, between producers and consumers, and do not hinge any longer on those strictly political relationships which occupied the foreground while our present democratic system of government was sloughing off the skin of eighteenth-century oligarchy and seventeenth-century absolutism. To the average Englishman neither red nor black dictatorship makes any appeal. He is anxious not to overthrow constitutional government by the free consent of the whole adult population, but to use the machinery of Parliament to mitigate the misery and inequality of an economic system mainly designed to produce profit for the lucky possessors of capital; he sets out to achieve his purpose by imposing heavy direct taxation on the wealthy, by the erection of social services for the outcast millions, and by the extension of public control to all the key points in the delicate mechanism whereby our daily wants obtain some small measure of satisfaction. We have with us, whatever Party may steer the nation through these troubled times, the unemployed, the underfed, the underhoused; and the remedies prescribed for these lesions, whether shouted from Party platforms, or boldly enunciated in Party programmes, or enigmatically embodied in Acts of Parliament, are always proposals to alter in

some fashion the system of labour and production by giving a statutory stimulus to industries that provide employment, or to wages that bring nourishment, or to firms that build cheap houses for the working class.

I look back on three terms at the London School of Economics as one of the least ill-spent years of my youth ; and I am convinced that at least a nodding acquaintance with the elements of political economy is as indispensable for a useful career in politics as a knowledge of law for the advocate or of theology for the divine. This is already recognized by those politicians who follow the publications of the New Fabian Research Bureau, and even by governments in so far as they consult their permanent Economic Advisory Committee. Let me take one outstanding example of the practical bearing of economic research. There is no one inhabiting the vast area of the earth's surface affected by capitalist production who does not suffer in some degree from the blighting effect of the trade cycle, which impoverishes all classes of the community by forcing once-prosperous companies into bankruptcy, by increasing unemployment on an enormous scale, and by depressing even lower the wretched standards of the poor. The causes responsible for this scourge have been brought to light by professional economists, and the only hope of stopping its repetition *ad infinitum* is either to eliminate them altogether, or, if this attempt fails, to counteract as far as possible their malign influence. But the violence of boom and depression remain unaltered if business men are left alone to

put their house in order ; the bitterest lessons seem to teach them nothing. That is why governments, acting for the afflicted population of their countries, have been obliged to intervene with legislation designed to check undue expansion or to revive the dying embers of industry and commerce. Hitherto their action has been too tardy to prevent credit and investment swelling to those colossal dimensions that always precede collapse.

The traditional inertia of governments having condemned us to endure the painful consequences of a periodic shattering disequilibrium between supply and demand, one might at least expect that they would do their best to start the upward swing by putting industry, crippled by speculative investment, back on its feet again. Past experience lends little colour to such optimism. Their financial policy during the depression that began in 1929 was directed to balancing the national Budget by means of drastic reductions in public expenditure. This cruel deflationary process was just the reverse of what economists advise. For they recommend during periods of depression a large expenditure of public money, accompanied, if necessary, by temporarily unbalanced Budgets, in order to offset the sudden shrinkage of private investment ; the proper time to economize, and to pay off your national debts, is when the independent enterprise of ordinary business has brought about a boom. The first signs of recovery after the crisis of 1930 and 1931 were visible in Sweden, whose Government had adopted from the first the expansionist or reflationary policy advocated by the pundits of trade cycle

theory. This important instance of the interaction between legislation and economics drives home only one point of contact between the two ; any Parliamentarian could adduce a vast number of other cases in which legislators are shaping and altering our economic system, and I shall not labour the obvious fact that such major questions of policy as the degree and incidence of taxation, the merits of protection versus freedom of trade, the proper relationship between collective control and unfettered individual initiative, are largely, if not entirely, dependent on economic considerations for their solution.

Now the legislator cannot dispense with an insight into those cultural and political aspects of social life that may be overshadowed, but cannot be completely obscured, by the burning economic issues of the day. He must be careful to steer clear of the one-track Marxist or Douglasite mind. His reading should not be confined to stodgy volumes on money, on capital and labour, on marginal costs and diminishing returns, but should be extended to embrace as far as possible the outstanding facts in the last five thousand years of human evolution described by historians, classified, explained, and systematically ordered by contemporary sociologists. A thorough knowledge of the past is an essential background for the wise legislator. For there is continuity in the growth of human society as well as in the diffusion of energy through space and in the movement of life towards new species of being, and the most earth-shaking revolutions are only an acceleration of the universal movement of social

groups forward to a higher degree of civilization or backward into the half-animal twilight from which a chosen few have partially emerged. Every country has been moulded through the centuries of its being into the peculiar shape it assumes at the moment we call "now" by a vast conflux of heterogeneous forces, and the practical statesman is the man who, by his understanding of the institutions, traditions, and practices inherited by his fellow countrymen from the past, knows how to prolong into the distant future whatever they may contain of liberty, equality, generosity, broad-minded tolerance, and precious accretion of culture.

The political reactionary is he who would either retard the process of historical change by a sort of perpetual repetition of the *status quo*, or transform the evolutionary metabolism of his social group from immature growth into premature decay. To the second category belongs the Fascist, the champion of rule by authority and brute force, who has already succeeded in lowering the standards of pre-war civilization throughout the bulk of continental Europe. To the first belongs the average indolent, apathetic citizen of the middle or upper classes, who has pegged out his own little claim and is now only troubled by the constant fear of losing it to those who have none. At an opposite pole to these loiters, a little sadly, the utopian dreamer; through ignorance or excessive delicacy of conscience he hesitates to plunge boldly into the stream of events, building instead his ivory tower on its banks, whence he can watch with melancholy resignation the tumultuous onrush of its turgid waters. Too many intellectuals,

whose sweet reasonableness would otherwise help to break the spell cast by demagogues over the mob, retire, without striking one blow for democracy or peace, into the rosy, insubstantial mirage of their own dreams.

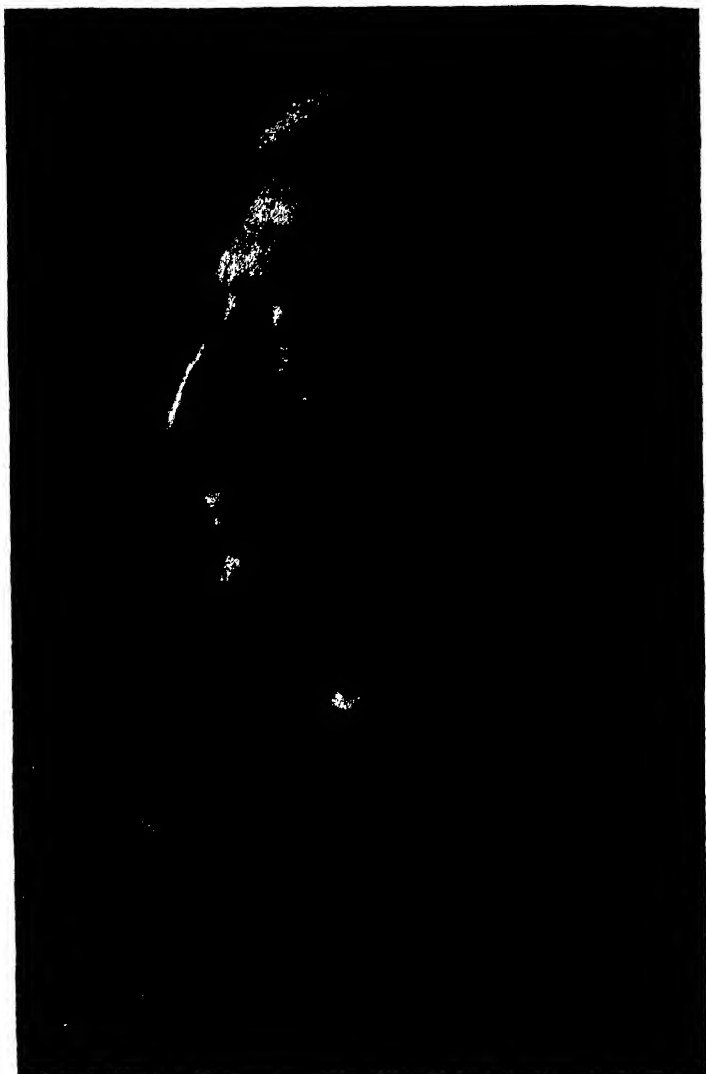
I want in conclusion to touch briefly on one other branch of knowledge to which legislators could profitably turn for intellectual enlightenment. Without necessarily sacrificing the time that would be taken up in qualifying for the legal profession, they should at least be able to recognize the main principles of our system of civil and criminal law, to appreciate the manner in which it is administered in our Courts of Justice, and to understand the treatment accorded to convicted offenders in different penal institutions throughout the land. The representatives of the people at Westminster ought to be the zealous guardians of their existing liberties as well as the pioneers of greater freedom ; and there is a grave danger, with the steadily increasing power of the State, that traditional liberties guaranteed by legal rights may be encroached upon by Parliament owing to the ignorance or indifference of its members. I well remember how, only a short time ago, a Bill that had passed the Commons would have actually reached the Statute Book, but for the emphatic protests of some vigilant Law Lords, with a clause that authorized a Government Department to obtain a verdict against certain hapless farmers unless they were able to prove their own innocence to the satisfaction of the Court.

There is much dead wood to be cut away in the forest of statutory enactments and judicial decisions

as well as from the ancient timber of modern legal procedure. Who can be satisfied with a legal tariff so high that it prevents all save millionaires and paupers from obtaining redress for their legitimate grievances before the tribunals of the Law? Who can feel that even-handed justice is being meted out by hundreds of untrained magistrates, many of whom are on the verge of senile decay? Much of the substance of British law is no less anachronistic and unjust than much of the form in which it is regularly administered; no Englishman who has been abroad can wholly stifle his shame at the barbarism of our laws of inheritance and divorce, or altogether conceal his bewildered amazement at the obsolete feudal privileges preserved by law against the encroachments of democracy. And how about the fate of those who have offended against legal conventions protecting the sanctity of life and property? Should they really be confined like wild beasts behind locked doors and iron bars, fed on nauseating food, kept in solitary confinement, and strung up with a noose round their necks when, in a momentary fit of ungovernable passion, they have killed a fellow being? It all depends on whether you regard prisons as a sombre deterrent against crime or as the spacious gateway to a new life.

If anything emerges clearly from an intellectual odyssey that started from philosophy and ended at penology, I hope it is this single truth; that science, which has already given the human species dominion over the lower animals and emancipated it to a remarkable extent from the overpowering forces of Nature, *can* provide the modern Solon with an

effective means of abolishing the misery born of want and of raising the millions to a level of material well-being at which they will be able to share, for the first time, in the fairest treasures of our whole cultural heritage. Only a prophet could tell us now whether the most precious instrument of human progress will be used to nip civilization in the bud, or to lay the foundations of a world city.



PROFESSOR WILLIAM McDOUGALL

CHAPTER XVI

PHILOSOPHY AND THE SOCIAL SCIENCES

Her thinkers are again beginning to see what they had only temporarily forgotten, that a true Psychology is the indispensable scientific basis of Morals, of Politics, of the science and art of Education. That the difficulties of Metaphysics lie at the root of all science, that those difficulties can only be quieted by being resolved, and that until they are solved, positively whenever possible, but at any rate negatively, we are never assured that any human knowledge, even physical, stands on solid foundations.—JOHN STUART MILL.

WE here speak of social philosophy and of the social sciences, and among those who write on the methods of the social sciences one of the topics of perennial dispute is the question of the relations of those sciences to philosophy. The topic is of considerable importance; and, since high authorities have not yet reached agreement, it remains a source of some perplexity and confusion for the general reader. This short paper is designed to define the question at issue and the answer which commends itself to one who for many years has endeavoured to view it impartially from all sides.

The present confusion, uncertainty, and diversities of opinion are in part the product of the course of development of thought from the time when social

philosophy was initiated by the relentless questioning about human affairs addressed by Socrates to the young aristocrats of the Athenian democracy.

It is necessary to come first to some understanding or working agreement on what we mean by philosophy as an enquiry distinct from, or at least in some way different from, the enquiries which we call scientific. Lack of agreement on this essential prior question remains a chief source of the confusion which envelopes our topic.

By derivation the word "philosopher" means one who loves wisdom or, more exactly perhaps, one who esteems wisdom so much that he actively pursues it, endeavouring to become wise. Now, wisdom is more than knowledge. A man may be wise without having acquired much knowledge; another may acquire much knowledge without becoming wise, indeed, while remaining very foolish. The difference between wisdom and knowledge is the clue to the difference between Philosophy and Science. For philosophy is the enquiry that should lead to wisdom, while science is the enquiry that should lead to knowledge. All enquiry effectively directed to the attainment of wisdom is philosophical; all enquiry that is effectively directed to the attainment of systematized knowledge is scientific.

Before following up this clue, let us clear the ground by discussing other views of the difference between philosophy and science. First, a few words about the word "metaphysics". There have long been and there still are philosophers who profess to seek, and even to find, knowledge of a very special kind, knowledge which they call "metaphysical",

and for which they claim a certain superiority as compared with all merely scientific knowledge. This claim to superior validity made on behalf of metaphysics or metaphysical knowledge is resented by many men of science, and is the main ground of the long-standing quarrel between some philosophers and some scientists. Before we can intelligently take a side in this dispute, we must distinguish two meanings of the term "metaphysical".

In one usage the word implies a particular method of enquiry and its products or conclusions, the *a priori* and deductive method. As the best illustration of the method we may cite geometry, or what used to be called "Euclid". In this discipline, as every schoolboy knows, we begin by accepting certain "axioms", propositions which seem to be self-evidently true and indisputable; we then proceed to deduce from these *a priori* premises a long series of propositions about spatial figures and relations; and these conclusions, reached by deductive reasoning, must be accepted as true—on two conditions: first, if our reasoning is correctly conducted; secondly, if (and this is the big *if*) our axioms are true or accepted. Metaphysics (in the one sense of the word) professes to find or formulate axioms, *a priori* or self-evident propositions, about the world in which we find ourselves, and to deduce more detailed knowledge of it by reasoning from these premises.¹

¹ Closely allied or mixed with this procedure is another method of discovery, namely the analysis of concepts. Thus the philosopher Fichte wrote: "If there are to be human beings at all there must be a plurality of them. So soon as we fully define the concept of a human being, we are impelled to fare beyond the thought of the

It is now pretty generally agreed by almost all men of science and by many philosophers that knowledge of the world of really existing things cannot be obtained in this way; that all so-called axioms are but postulates; that the validity of all the propositions deduced from them is conditional upon the validity of those postulates; that the true form of such reasoning is always: if it be true that two parallel straight lines never meet, then it follows that, etc. That is to say, it is pretty generally agreed that no *a priori* propositions are indisputable, that even the so-called axioms of geometry cannot be held to be true of physical reality; that the only valid way of reaching general propositions about real existents is the way of observation of many instances, the way of inductive generalization, and that the general propositions or "truths" thus reached are but hypotheses or assumptions which, even when verified by further observation and experiment, have only the status of theories; and of any such theory we are entitled to claim only that it has a greater or less degree of probability, according to the width of its inductive basis and the severity and thoroughness of the verifying processes applied to it.

The other meaning of the word "metaphysical" is the original meaning. The books written by Aristotle were arranged in a certain order; those which dealt with the physical world and the world individual, and to postulate the existence of a second, for thus only can we explain the first." Belief in the efficacy of this method of discovery was, it would seem, founded in an assumption of some supernatural origin of "concepts" such as was taught by Plato and by Descartes.

of living things were followed by those which dealt with the mind and its working ; and, since within this arbitrary sequence the latter came after the former, they were called " metaphysical treatises ", meaning those placed *after* the physical, or later in the series. Accordingly, " metaphysical " was widely used to imply enquiries concerning mind and its functions. And this meaning, we may notice, was prevalent, especially among the Scottish philosophers, until recent times. Further, in accordance with this usage, since metaphysics was regarded as the philosophical discipline *par excellence*, all enquiries concerning mind and its functions were classed as philosophical rather than as scientific.

Now it has become increasingly clear that even the most purely objective enquiries into the nature and processes of the physical realm cannot properly ignore the nature and functions of mind ; that the questions of the accuracy and validity of observation and experiment are inevitably tied up with questions concerning the observer's mental functioning. Increasing recognition of this truth is one of the distinctive features of modern physics. In so far as men of science have taken account of this dependency of physics upon " metaphysics " (in the second sense defined above), they have been regarded as bringing philosophy (or metaphysics) to the aid of science.

But, although the recognition of this dependency of physics upon mind and its functions is of great importance, this usage of the term philosophical (or metaphysical) has been undermined and rendered undesirable by the advance of science in

another direction: namely, the realization that the enquiry into the nature of mind and its functions may be and must be conducted by the same methods which have proved so successful in the sciences of external nature, namely observation, experiment, inductive generalization, deduction, and empirical testing or verification. And this has led to the development of the empirical science of mind, psychology, the science or would-be science which aims to tell us how the mind functions. Hence, it is agreed, even when the physicist or natural scientist takes account of all available knowledge of the mind's functioning, he does but widen the basis of his enquiry, by bringing to his aid an additional province of empirical science; and his procedure may claim to be philosophical only in the sense of being more comprehensive, taking account of a wider range of scientifically founded truth or, to speak strictly, probability.

Some authorities (of whom in recent times Herbert Spencer was the chief), while repudiating the claim of metaphysicians to have some method of achieving truth distinct from the methods of science, regard comprehensiveness as the one essential mark which distinguishes philosophical from scientific enquiry; they assert that philosophy is merely and essentially the endeavour systematically to synthesize all knowledge attained by the several sciences.¹

¹ Closely allied with this is the view which regards as metaphysical or philosophical all speculative suggestions about the nature of the world which far outrun the evidence obtained by the methods of science. Those who use the words in this sense commonly say that such speculation, in so far as it is truly philosophical, is the exercise of a peculiar mental function (or the exercise of the mental functions in

Now it is clear that, if concern with the mental activities were the distinguishing mark of philosophy, all systematic enquiries into the many forms and manifestations of social life and activity would have to be regarded as branches of philosophy rather than of science : but, though the older fashion was to regard them as such, we now by common consent recognize a growing array of social sciences (or at least fields of enquiry which are potential sciences) of which economics and political science are perhaps the best defined and most generally recognized ; while others are proposed, their claims to be sciences (actually or potentially) being upheld by some authorities and denied by others. Such are history, linguistics, sociology, social anthropology, jurisprudence, comparative religion.

It is clear that all these are mainly or largely concerned with the products of mental activity and therefore, like the physical sciences, must bring to bear whatever well-founded knowledge of mind and its functions the empirical science of mind may put at their service.¹ But, no more than in the case of

a peculiar manner) which they call "intuitive". But, since the formulation of working hypotheses (a very essential part of scientific enquiry) seems to be achieved by many men of science by aid of a mental activity indistinguishable from that "intuitive" process claimed as the specific method of metaphysical enquiry, this proposed distinction is unacceptable ; although expounded by so great authorities on both science and philosophy as Professors Henri Bergson and A. N. Whitehead. (Cf. the latter's essay, "Science and Philosophy", in *Adventure of Ideas*, New York, 1933.)

¹ Here we may merely note in passing the following strange anomaly of the present time. While the physicists are increasingly recognizing that they must take account of the mental functions involved in the procedures which are used for the widening and deepening of their understanding of the physical world, many of the devotees

the physical sciences, does this necessary and inevitable reliance on psychology render these social studies branches of philosophy rather than of science.

Since we have denied the claim of philosophy to have a method for the discovery of truth, for throwing light on the nature of things, peculiar to itself, a metaphysical method distinct from the methods of science; since also we cannot admit that any science when it takes account of the mental activity involved in its own development (as in the construction of all the sciences) thereby becomes a branch of philosophy; since we also deny that comprehensive synthetic or synoptic treatment of the problems of science constitutes philosophy or brings us a kind of truth other than scientific truth or knowledge, what remains as the task and province of philosophy?

There are men of science who, having followed some such line of reasoning as that briefly sketched above, ask this question, and confidently return the answer—Nothing remains. Philosophy, they say,

of these social studies still fail to recognize that they also require to take account of the mental activities; and indeed in a very much more extensive fashion, since the objects of their enquiry (as conceived and described by them) are not only shaped and distorted in various fashions by the mental activities of men (as are all the objects of the physical sciences) but also are for the most part wholly created, originated, evolved, and shaped from first to last by the mental activities of men, and consequently bear, in every detail of their form and substance, the stamp of that origin, the image and superscription of the human mind. The first sentence of J. S. Mill's statement cited at the opening of this essay, referring as it did to the thinkers of England, was unduly optimistic. For further discussion of the topics of the foregoing paragraphs the reader is referred to my *Frontiers of Psychology*, London, 1934.

means metaphysics ; and metaphysics, they say, is merely vague speculation and illegitimate wishful thinking about problems to which science cannot yet return definite answers. And they add that, just as science has taken over many problems which in earlier ages were regarded as lying within the province of philosophy, so it will continue to take over ever new fields and problems, finding ways to throw light on them by its own methods ; and, in thus annexing them, will displace or squeeze out philosophy more and more, until nothing shall be left for poor philosophy, which, having no foothold and no function left to it, must die a natural, if not quite painless, death.

But this view, that philosophy becomes inevitably and increasingly an anachronism in proportion as science advances, is quite untenable. There is, there always has been, and there always will be a proper field and function for philosophical enquiry, no matter how victoriously science may continue to march on to ever-new conquests.

Let us first examine this proposition in relation to the so-called natural sciences or, better still, the purely physical sciences, where the question at issue is less complex than in relation to the social sciences.

We have seen that physicists are increasingly recognizing the necessity of taking account of the mental activities involved in observing and in recording, in measuring and in experimenting on, physical phenomena or events. And we have seen that to seek in this connection the aid of psychology does not in any sense make physics less scientific or convert it into a branch of philosophy. But

psychology, the empirical science of mind and its functions, is not the only kind of systematized study of mental functions.

Beside and distinct from psychology, the branch of science which seeks to throw light on the constitution and working of mind, are two recognized departments of systematic enquiry into mental activities to which an immense amount of intellectual effort and discussion has been devoted, namely theory of knowledge (or epistemology) and logic. These two closely allied enquiries are sometimes loosely called sciences ; but they are more properly regarded as departments of philosophy. What, then, is the difference between, on the one hand, psychology and, on the other hand, theory of knowledge and logic, a difference which requires us to class the former with the sciences, the latter with the philosophical disciplines ? The answer to this question indicates the true line between Science and Philosophy.

All three of these enquiries are concerned with mental functions. All three are very comprehensive, each of them having in a sense well-nigh all knowledge for its province.

Let us first be clear as to what we mean by knowledge. Knowledge means true beliefs, and perhaps also valid or well-founded opinions. Now psychology seeks to show how beliefs and opinions are formed, to elucidate the processes by which beliefs and opinions are reached or engendered and how, once formed, they play their parts in further mental operations : it is not directly concerned with the question whether the beliefs we acquire are true or

false, the opinions valid or invalid. Epistemology, on the other hand, seeks to tell us how the mind must or should work if it is to achieve true beliefs and valid opinions: its task is to tell us how such beliefs and opinions may be reached. And logic also is concerned with these same questions, but within a more narrow field of the mind's operations, namely, the field of reasoning, the process of reaching new beliefs by purely mental operations upon beliefs already established. Logic must therefore be regarded as one specially important branch or department of epistemology.

Epistemology, or the theory of formation of true beliefs, must remain an enquiry distinct from all the sciences and fundamental to them all; for it prescribes the standards and criteria of truth and validity, the rules and norms of all mental activities directed to the attainment of true beliefs and valid opinions. It is concerned with defect and perfection of mental operations in so far as they aim at true beliefs. When it is applied to any one science, it prescribes or constitutes the methodology of that science.

The relation of epistemology (inclusive of logic) to the physical sciences and indeed to all the natural sciences (meaning the biological as well as the physical sciences) is, then, relatively simple. For they all are concerned wholly and solely with establishment of true beliefs. Wider, fuller knowledge, or a system of true beliefs, is the common goal towards which they all strive.

This branch of philosophy called epistemology (inclusive of logic) is, then, very necessary to all the

physical sciences. In the purely logical order it should have come before all the sciences. But men were incapable of thinking out an adequate theory of knowledge before they had made much progress in the attainment of knowledge. They first and for long ages acquired knowledge without knowing how they did so. Then came a period during which they reflected on the problem—How does thinking go on? During that period psychology was not distinguished from epistemology.¹

Finally came the period when these two were distinguished and, in principle, separated. Understanding of the knowing-process was a case of *solvitur ambulando*; it came from reflection upon repeated failures and successes of efforts to obtain knowledge; that is to say, with the growth of the sciences. And of all the sciences the most important for the development of the theory of knowledge was psychology; for, clearly, it was not possible to arrive at the normative principles or rules for the achievement of knowledge without some knowledge of the way the mind does and can work. It is like the old problem: "How can we ever learn to swim?" For, in order to learn to swim, we must first trust ourselves upon the water; but before we can remain on the surface of the water, we must already be able to swim. And mankind is gradually solving the epistemological problem as the individual solves the problem of learning to swim: namely, by jumping in and doing the best possible with what imperfect powers he can command.

I have dwelt at some length on the relation of

¹ By many philosophers the distinction is still ignored.

theory of knowledge to the physical sciences ; because, when we have made that relation clear to ourselves, our understanding of this simplest case will make it easier to understand the more complex, more intimate, and more tangled relations between philosophy and the social sciences.

First, let us note that, since all the social sciences are concerned with human activities or the products of such activities, they inevitably require constant and intimate support and assistance from psychology. But that in itself does not make them branches of philosophy, as was at one time the conventional view.

Secondly, we note that all the social sciences, since they are sustained co-operative endeavours to achieve fuller knowledge and understanding of the phenomena of their special fields, require the aid of theory of knowledge and of logic for the development of their methodology. And, since their problems are far more difficult and more complex than those of the physical sciences, the problems of their methodologies are the more difficult and are the more in need of the assistance of a highly developed theory of knowledge and logic. Consider, as one illustration, how the historical and evolutionary aspects of many social and human enquiries greatly complicate their methodology, raising acutely the difficult problem of the proper relations between history and science.

But a still greater complication of the relations of philosophy to the social sciences arises from the fact that these are concerned not only with the pursuit of truth, strive not only for knowledge or true

beliefs (which is the sole task of the physical sciences), but also have to take account of the endeavours of man towards other great goals, especially the goals of happiness, of individual welfare, of material prosperity, of moral perfection, of beauty, of better social organization, of political order, of improved institutions, of progress of humanity towards some higher and more beautiful type of being. In addition, then, to the one clearly defined goal, the goal of knowledge, which is the one and only goal of the physical sciences, or at least the only goal with which the physical scientist need concern himself and commonly has concerned himself, the social sciences inevitably must take account of these many other goals, or of some of them. And especially the physical scientist, when seeking the aid of psychology, can assume that all his fellow physicists are motivated by one single desire, the desire to increase knowledge; a state of affairs which greatly simplifies his methodological problems: whereas among the social scientists, on the other hand, motivation is inevitably complex and varied; they are moved not only by the desire for more knowledge, but also by the desire to promote the advance of one or other social group (or of mankind as a whole) towards one or several or many of such goals as were mentioned just now. This complexity of motivation of the social scientists complicates their methodological problems; that is to say, it results in their making larger demands upon those two allied branches of philosophy which, as we have seen, are indispensable aids to all the sciences, namely, theory of knowledge and logic.

But that is not all. In the physical sciences, where the one goal and the one motive are clearly definable, all subsidiary goals, such as the development of new methods, new apparatus, new techniques, are clearly related to the one supreme goal as means to that one end, the increase of knowledge. In the social sciences, on the contrary, the one goal of science and the one truly scientific motive are inevitably complicated by the many goals and the many motives, and by questions of the relations, relations of rivalry and conflict and subordination and harmony, between these many goals and these many motives. In fact, in the social sciences the truly scientific spirit and motive are liable to be not only complicated by, but also to be subordinated to, these other goals and motives : and this was especially true of the early stages of all the social sciences ; they were initiated not so much for the sake of increase of knowledge as a goal in itself ; rather, increase of knowledge was sought only as a means to other ends. Consider a trivial example. A man might set out to discover how many homes in a given county have telephones. No rational being would seek such knowledge for its own sake, but only as a means to promote some other end ; for example, it might be in order to promote the realization of the ideal of a telephone in every home. Thus the social sciences are all cluttered up with a multitude of ideals and slogans, such as " a telephone in every home ", " two cars in every garage ", " education for every child ", " one man, one vote ", " equal pay for equal work ", and also such more general slogans as *Liberté, Égalité, Fraternité* : and every

slogan is a problem not only for science but also for philosophy; a problem which science alone cannot solve, because no increase in knowledge, not even complete knowledge of all relevant things and relations, would provide answers to these questions. In other words, the problems of the social sciences are inextricably tangled with philosophical problems; the question, "What is the nature of things?" or "What is the course of events?" is tangled with the question, "What things should be? What ought to be the course of events?" And these are problems of norms and standards, of rules and obligations; or, in one comprehensive phrase much in favour at the present time, they are problems of value.

Thus the proper problems of the social sciences are complicated by the very subtle psychological problems of valuation; also they are inevitably mixed and tangled with a multitude of philosophical questions, the questions not only of final goals and absolute values, but also the many subtle questions of relative values, and the supreme and remote yet ever-present problem of a valid hierarchy of values. And the solution of many of these problems of value (especially the greater ones) presupposes a vast amount of knowledge which we do not command; *e.g.* answers to such scientific questions as, "What is the nature of man? Is he merely a machine, or is he a spiritual being, perhaps immortal? Is he mechanically determined in his every action, or is he a creative agent?" "How did man with his special powers originate?" "How may the race undergo further changes?" In short, the answer

to the great philosophical problems of value, of ought, of right and wrong, of better and worse, to the problem, "What is progress?"—in fact, to the supreme philosophical problem, "What ought we to do?"—must turn, in some measure at least, on the answers still to be found to the greater questions of science. For it is clear that the answer to the question, "How should man act? What is the duty of man?" must depend upon the answer to the question, "What is man? How is he constituted? What forms of action are possible to him?"

Since this is supposed to be a simple discussion for the lay reader, let me try to illuminate the preceding somewhat abstract discussion with concrete illustrations. Some years ago a very famous scientist made a lecture-tour in Europe and America, reporting a certain conclusion based upon precise experimental observations. The lectures evoked very widespread interest; for the conclusion, if acceptable, was of the utmost theoretical and practical importance for all mankind. A year or two later he revoked all that he had said on this topic in a single very small footnote on a page of a large book. It was rumoured that he had been misled by one of his research assistants when in an early stage of general paresis, an insidious malady which impairs the moral and intellectual powers of the patient. The incident presents a nice tangle of scientific and moral problems. If we had a full knowledge of the kind and degree of impairment of the mental powers of the unfortunate assistant, there would still be room for a variety of opinions; first as to the soundness of the methods employed and the validity of

the judgment and reasonings by which the conclusion was drawn from the experimental observations ; secondly, as to the moral responsibility of both principal and assistant, but more especially of the former in giving the widest possible publicity to highly improbable conclusions on a very slender experimental basis, and later revoking them in an obscure footnote only, without a word of explanation or apology.

Let us construct an imaginary case of a not uncommon kind. A man of wealth has been suddenly killed through his car leaving the road at a moderate curve and plunging down a steep hillside. His life had been insured against accident for a large sum. The liability is contested by the insurance company on the plea that the death was a case of *felo de se*. Counsel for the trustee maintains that the fatal incident was a pure accident, such as might happen to anyone. He points out that the road surface was wet from recent rain ; that, according to several eye-witnesses, the car was travelling at some fifty miles an hour, not an excessive pace for a high-powered car driven by an experienced owner keen to get home for supper with his wife and family, to whom he is known to be very devoted. Further, he points out that the affairs of X. were prosperous, his health, his fortune, his circumstances seemed altogether enviable ; an autopsy has revealed no indication of ill-health, especially no trace of that inflammation of the surface of the brain which occurs in general paresis ; enquiry shows that his conduct had been normal, and his physician certifies to a recent satisfactory overhauling ; there was no

motive for suicide. Further, he points out that, when the accident occurred, the daylight was failing; and he refers to the psychological truth, familiar to all drivers, that in a dim light every man is very liable to misinterpret the visual impressions he receives, especially when fatigued by long hours of driving and, perhaps, refreshed by a cocktail or two. The accident was, therefore, such as might have happened to any man under such circumstances.

Counsel for the insurance company brings evidence that the car was of the finest make, nearly new and in perfect order; that the tyres were in excellent condition; that many drivers, including the dead man himself, have frequently taken this curve at fifty miles an hour; that the road surface is by no means unduly worn or polished. Then, turning from the physical to the psychological factors, he points out that X. had driven only some fifty miles that day; that he had merely been to the near-by city to do some business; that he was a rigid abstainer. He then reveals that letters found on X. show that he has recently found reason to believe that his wife is in love with another man: in view of his well-known devotion to his wife and only child, this suggests an abundantly adequate complex of motives for suicide.

In rebuttal of this contention, counsel for the trustee calls medico-psychological experts who testify that such a man, having made this discovery, would inevitably be in a state of acute conflict. By such conflict his mind would not only be fatigued, but also would be so absorbed in a train of painful reflection as to be incapable of interpreting sense-

impressions with normal rapidity and efficiency. He supports this contention with evidence that a fully loaded automatic pistol was found in X.'s pocket ; that X. did not normally carry any weapon ; that he had bought the pistol in the city a few hours before the accident : all of which tends to show that he was contemplating some violent deed ; and presumably was intensely occupied at the fatal moment in painfully debating the pros and cons and the possible methods of carrying out his intention. Further that X. was a devout Catholic who would shrink in horror from suicide. Therefore the disaster must have been pure accident, to which the man's state of acute mental conflict no doubt conduced.

In reply to this, counsel for the company plays his trump card. He shows that X. had made his discovery at least a month ago and had driven since that date some thousands of miles without accident ; that the business which he had done in the city was to visit his lawyer to sign a codicil to his will leaving all his property to his only child. He does not question the relevance of the fact that X. was a devout Catholic ; but he contends that this would make him shrink from murder no less than from suicide. He admits, therefore, that the purpose for which the pistol was bought and carried remains an open question. But he points out that X.'s devout Catholicism would also make action for divorce impossible to him, would close for him this only door of escape from an intolerable situation. He calls to the witness-stand a world-famous psychologist who testifies that in his experience suicide cases of this type are all too frequent and familiar. In not a few

such cases previous analyses of their dreams had revealed quite clearly subconscious repressed tendencies to suicide ; and in some cases in which the attempt had proved unsuccessful he had been able to confirm the truth of the view that the fatal act had been prompted by such a repressed impulse, momentarily gaining control over action. In his confident opinion, X., confronting an unbearable domestic situation, had thought of suicide, but had repressed the thought-impulse in horror. He was not the type of man who would use a pistol with intent to murder. X.'s visit to the city could have had no other purpose than to make the new disposition of his property in anticipation of his own impending death. All the train of action may have been prompted by an obscure subconscious anticipation of his approaching death, without deliberate and conscious planning to end his own life. But that X. was the victim of a suicidal impulse he could not doubt.

It is clear that the law has to make what it can of a sad tangle of physical facts and psychological probabilities. When the court has decided the case according to the evidence and the existing state of the Law, the question may well arise : " Was the law a just law ? " Clearly a moral or philosophical problem.

And Religion and Ethics also may be called upon to return their verdicts upon the incident. If the Law has rendered a verdict of suicide, shall the Church deny to poor X. the rites of Christian burial and the hope of eternal life ? Must he lie in potter's field ? And, if psychology returns the verdict that

X. put an end to his life in order to solve the insoluble triangle, and that the dominant motive of the act was the desire to set free his beloved wife from an unbearable conflict in a way that would allow her to find happiness in a new union, shall Ethics pronounce him guilty of an unpardonable offence against the moral law? "For greater love hath no man . . ." And is not the law of love higher than the law of life?

The foregoing examples illustrate how problems of science and problems of philosophy, in the most intimate relations to one another, are raised by incidents of common life; how, even when science has acquired full knowledge of the facts and has explained the sequence of events, the philosophical problems may remain crying aloud for solution. They show how knowledge and wisdom have their distinct rôles to play, rôles which, however intimately and reciprocally dependent, remain distinguishable, falling within the very different provinces of Science and of Philosophy respectively.

And the same is true of all the social sciences. For the most part their problems were first formulated as practical problems of right and wrong conduct; problems of obligations, of values and relative values, of lower and higher goals, of standards of right thinking and of wise laws and rules and procedures for the attainment of those goals. Only at a later stage of the development of our culture did men begin to see clearly that the finding of valid answers to the philosophical questions might be greatly promoted by the building-up of a body of systematic or scientific knowledge of human nature,

of social life, and of the nature and growth of social institutions; and that such knowledge would render a second great service, namely, would show how best to attain the goals or realize the values which philosophy prescribes.

Some progress has been made with the separation of several social sciences from philosophy: nevertheless, problems of the two kinds are still commonly discussed in intimate conjunction; and the two enquiries run side by side, sometimes mutually hampering one another. One may find illustrations on almost any page of books and articles on social-science problems. Thus, I open a number of the journal *Social Science* and transcribe the first lines of an article by a professor of economics: "To discuss the *wisdom* of public expenditures is one thing; to discuss the *wisdom* of a method of financing public expenditure is something entirely different. No expenditure *should* be made, *of course*, which cannot be *justified*. The function itself must not only be *desirable*, but the cost *must* be as low as possible, and even then within the limits of what the people *can* afford." All the italicized words in this passage imply questions or principles of valuation or relative value, of standards, of goals, questions that must be answered or principles that must be questioned, before the science of economics can properly perform its part.

Ideally, social philosophy should first lay down its specifications in accordance with a hierarchy of values completely thought out and validated. Then the various social sciences should proceed to discover how those values may best be realized. But

this ideal order of procedure is impossible : for it is only by the aid of advancing science, or rather by the aid of knowledge constantly enlarged by scientific research, that philosophy can progress with her own endless task of refining our values, of defining and more nearly prescribing our goals, and of rectifying our scale of social values. It is, then, right and well-nigh inevitable that the social scientist shall be also a philosopher, or, at least, interested in social philosophy and its problems. And it is a mistaken policy to aim at raising up a tribe of pure social scientists who shall be blind and deaf to social philosophy ; it is futile and worse than futile to carp at the social scientist who mingles philosophical considerations with his scientific observations and reasonings. Nevertheless, it is desirable that the social scientist shall understand what he is doing, shall recognize the distinction and the difference between the two kinds of enquiry, and shall understand the relations between them ; and especially shall recognize that knowledge, and therefore science also, is instrumental, is only the tool, the means which wisdom uses and directs towards the goals she prescribes ; that, therefore, Science should be, always is, and must continue to be, the obedient servant of Philosophy.

The simple principle which I have briefly expounded in this essay is no novelty. It was stated by Plato in the formula that philosophers should rule. But at the present day it is neither understood nor accepted by many of those who prescribe for the maladies of a world in chaos ; nor by those men of science who decry all philosophy as merely

fanciful speculation, or even regard science as having already ousted it or reduced it to innocuous desuetude. Do we not hear, from persons who should know better, proposals for a Fascist government to be set up by a Great Conspiracy of men of science; or, more narrow still, proposals that government should be placed wholly in the hands of engineers, because they are the people who know how to get things done! ¹

Let me in conclusion insist upon the supreme joint task of philosophy and the social sciences. Older civilizations have decayed and passed away because they lacked both science and philosophy. Ours is threatened with a similar fate, and with more rapid destruction than they; not through lack of science, but through one-sided development of the sciences, through the backwardness of the social sciences which alone, under the guidance of philosophy, can adjust our social systems to the rapid changes of conditions of life produced at an ever accelerating rate by the victorious physical sciences. That disastrously lop-sided development of science is a consequence of our lack of wisdom and a sign of our need for more and better philosophy. ²

Of all the dangers threatening us, the most fundamental is the decay of men, the decline of human

¹ Not so long ago one great country, the United States of America, did elect an engineer to rule over it. And the result was, as we know, disastrous. Yet, in spite of that experience, there arose a great clamour for "technocracy".

² Cf. my *World Chaos, The Responsibility of Science* (London and New York, 1931) and my *Ethics and some Modern World-Problems* (London and New York, 1924). The substance of both of these books is reproduced in condensed summaries in my *Religion and the Sciences of Life*, London, 1934.

qualities. We are witnessing a world-wide demonstration that few peoples have the qualities, the combination of high intelligence and moral fibre, essential for the continued success of democratic self-government. We see whole nations given up to orgies of stupidity and brutality, and nations which, having failed miserably in their attempts at democratic freedom and self-government, have declined to a lower plane, humbly accepting, like cattle, regimentation forcibly imposed on the masses by the violence and cunning of usurping oligarchies. In spite of all this world-wide demonstration of the inadequacy of the qualities of the race to sustain civilization of the higher forms, in spite of accumulating masses of evidence of a general decline of human qualities,¹ our men of science and our philosophers for the most part refuse to accept the responsibility that is theirs. The men of science, who have learnt how greatly to improve many races of animals and plants (profoundly modifying in desired directions both bodily and mental qualities), plaintively allege that they do not know what kinds of change of the human species would be improvements. And the philosophers, repudiating the example of Plato, excuse themselves under the plea of ignorance, or find some moral alibi in ancient catchwords, such

¹ A very recent extensive and intensive study by an expert leads him to conclude that the populace of Great Britain is in all probability declining in average intelligence at the rate of one per cent in ten years, a rate of decline which, if it should continue, must in less than a century drag down our civilization in complete stagnation and decay. Cf. "Is National Intelligence Declining?" by R. B. Cattell, *Eugenics Review*, October 1936, and his *The Fight for our National Intelligence*, London, 1937.

as that all men are created equal and alike, or that unrestricted reproduction is a fundamental right of every man, of every moron, and of every criminal, a right which must not be infringed even though we all be dragged down together to the dust with the ruin of every ideal and every prospect of mankind.

Fiat justitia, ruat coelum! By all means! But what is justice? Does justice require that all men live exactly alike; that throughout the lifetime of every man three acres and a cow shall be his strictly apportioned lot? Let the philosophers think again. Let them take full account of all relevant knowledge which the sciences have built up; and surely they will come to see that Plato was right, that the supreme responsibility of philosophy is to shape the ideal, not only of society and of its institutions, but also of man himself. For social ideals can be brought nearer only by societies composed of men not too degenerate, not too far from an ideal type.

In a world in which the peoples that have created our culture and our civilization are dwindling away, both quantitatively and qualitatively, while the hordes of backward peoples (aided and abetted by all the resources of Western science and by the Western arts of medicine, of administration, and of war) continue to multiply ever more rapidly and to assert their right to overflow from their own lands into any and every place that promises them easier livelihoods and opportunities for still more rapid multiplication, these questions cannot fail in the end to provoke some misgiving and some reflection. If we are destined to go down, we shall at least

HUMAN AFFAIRS

not leave the cause of our decline as an insoluble problem for our possible successors. Our last philosophers will write our epitaph and find the true cause of our failure in our lack of adequate co-operation between Science and Philosophy.

APPENDIX

THE AUTHORS

PROFESSOR J. B. S. HALDANE, F.R.S.

The distinguished son of a great scientist. He was educated first at Eton College and later at New College, Oxford. In 1922 he became Fullerian Professor of the Royal Institution and is now Professor of Genetics at University College, London. He has been largely responsible for the introduction of quantitative methods into many biological fields. Author of numerous scientific papers on problems of biology and of many less technical essays and books of great sociological importance. Recently he visited Madrid to advise the Spanish Government on defensive measures against gas.

His best known books are probably *Daedalus* (1924); *Possible Worlds* (1927); *The Inequality of Man, and other Essays* (1932); *The Causes of Evolution* (1933).

PROFESSOR D. KATZ, D.PHIL.

Professor Katz has worked at the Universities of Göttingen, Rostock, Manchester, and London, and now he holds the chair of Psychology at Stockholm.

In his too brief stay in this country Dr. Katz endeared himself to a wide circle of psychologists and became known in a short time to a wider public. This was due not only to his unique approach to the most diverse psychological topics, but also to his personal charm and friendliness. His versatility is admirable; he has made luminous contributions to general experimental psychology and to

HUMAN AFFAIRS

special psychology of childhood, animals, and sense. His work is characterized by a particularly human touch and by an unfailing fertility of ideas, clothing the driest academic subjects with living interest.

Students of psychology in England suffered a great loss by his acceptance of the Professorship at Stockholm university.

His chief works, besides numerous papers in scientific journals, are : *The World of Colour* ; (with Rosa Katz) *Conversations with Children* ; and *Man and Animal*.

A. S. J. BASTER, B.SC., M.COM., PH.D.

Graduated London School of Economics, 1924 ; business appointment with Barclays Bank ; Lecturer in Economics, University College, Exeter, 1926 ; Research Fellow of Social Science Research Council (New York), 1930-31 and 1935-6, studying international banking and credit policy in the United States and at Geneva. Publications : *The Imperial Banks* (1929) ; *The International Banks* (1935) ; *Advertising Reconsidered* (1936). Articles in *Economic Journal*, *Economic History*, *Economic History Review*, *American Economic Review*, *Bankers' Magazine*, *London Economist*, etc. At present engaged on a study of the economic and political implications of partial planning in England and the United States.

MR. E. CHAMBERS

Graduated at Cambridge in 1922 and joined the staff of the Industrial Health Research Board in the same year. When his section of the Board moved to Cambridge in 1935 he became Assistant Director of Research in Industrial Psychology in the University of Cambridge. He married in 1926. He is a joint author with Mr. E. Farmer of numerous papers on the causes of accidents, and his independent works include papers in the *Journal of Industrial Hygiene*, the *British Journal of Psychology*

APPENDIX

(Monograph Supplement). In 1935 he was elected a fellow of the Statistical Society.

He is a keen golfer, and his further interests include music and literature. Clubs : The Oxford and Cambridge Musical Club.

LORD RAGLAN

4th Baron. Comes of a family distinguished in soldiery and statesmanship. Educated for a military career first at Eton College and then at Sandhurst. Political officer in Palestine, 1919-21. Resides during the greater part of the year on his beautiful country estate at Usk. From time to time he pays visits to London in connection with his anthropological work. In 1923 he married the Hon. Julia Hamilton and has a family of two sons and a daughter. He is a former president of the Anthropological Section of the British Association and is rarely seen in London outside scientific circles. He is an extensive reader in the branches of science allied to his own, and the author of many learned books and papers, including *Jocasta's Crime, An Anthropological Study* (1933); *The Hero, A Study in Tradition, Myth, and Drama* (1936).

C. P. BLACKER, M.C., M.A., M.D., F.R.C.P.

Born 1895; educated at Eton; served through the war in the Coldstream Guards, being twice mentioned in despatches, once wounded, and awarded the Military Cross.

Returned to civil life to study at Balliol, Oxford, first biology, then medicine. Clinical work at Guy's Hospital, then in practice as a psychiatrist.

Became general secretary of the Eugenics Society in 1931; has contributed to scientific journals research articles in psychological medicine and eugenics, and is well known for the following books written or edited: *Human Values in Psychological Medicine* (1932); *The Chances of Morbid Inheritance* (1934); *Voluntary Sterilization* (1934); *A Social Problem Group?* (1937).

SIR H. BRACKENBURY, M.D., LL.D., M.R.C.S., L.R.C.P.

Sir Henry Batten Brackenbury, the son of the Rev. Thomas Brackenbury, was born in 1866. He was educated at Kingswood School, Bath, and at the Westminster Hospital. From 1892 to 1927 he was in practice in the borough of Hornsey. There, despite his medical duties, he took a prominent part in civic life, and was Mayor in 1895-6. From then he was an Alderman until 1930, when he was created a Freeman. He was knighted in 1932.

He has always been keenly interested in education: from 1898 to 1903 he was a member of the School Board, and from 1903 to 1913 chairman of the Education Committee. From 1914 to 1930 he was president, and subsequently vice-president, of the Association of Education Committees of England and Wales.

In 1914 he became a member of the Insurance Acts Committee, and in 1927 a member of the Council of the Society of Medical Officers of Health. He is also an honorary Freeman and Liveryman of the Company of Stationers and Newspaper Makers, and a Fellow of the Chartered Insurance Institute.

Among the important positions Sir Henry holds are the chairmanship of the Council of the British Medical Association, the chairmanship of the Council of the Institute of Medical Psychology, and the vice-presidentship of the Central Association for Mental Welfare. He is a member of the General Medical Council and of the Advisory Committee to the Ministry of Health.

His book, *Patient and Doctor*, was published in 1935, and besides this he has written numerous articles on social insurance, mental deficiency, education, and public health.

RAYMOND BERNARD CATTELL, M.A., B.SC., PH.D.

Born 1905, and hence belongs to the first generation of post-war students, graduating with first-class honours in

APPENDIX

Chemistry from King's College in 1924. Studied under Burt at the Institute of Education and, becoming convinced that the solutions of most educational problems lie in advances in pure psychology, returned to King's College to undertake psychological research.

Lecturer in Educational Psychology, University College, Exeter, 1927-30. Research on Temperament Factors under Spearman, 1930-32. Held Child Guidance Council Fellowship in Clinical Psychology in 1932. Advisory Psychologist in Dartington Hall educational experiment, 1933. Since then has built up a Child Guidance Service at Leicester on new lines, within the educational system. Member of the Child Guidance Council, the Council of the New Education Fellowship and the editorial board of the *Journal of Exceptional Children*. Absent for the year 1936-7 on an enquiry, as holder of the first Darwin Fellowship, into the eugenic position as regards national intelligence.

Publications, mainly researches in psychological journals, but also: *Psychology and Social Progress* (1932); *Your Mind and Mine* (1934); *Guide to Mental Testing* (1936); *The Fight for our National Intelligence* (1937).

PROFESSOR M. GINSBERG

He graduated from University College, London, in 1912, with the award of first-class honours in Philosophy. In 1915 he was awarded an M.A. with mark of distinction and in 1923 a D.Lit. At University College he was a John Stuart Mill Scholar, Martin White Student, and Lecturer in Philosophy. Since 1924 he has been more concerned with sociology than philosophy, first as Reader in Sociology at the London School of Economics, and since 1929 as Martin White Professor.

Publications: *Psychology of Society* (1921); *Studies in Sociology* (1932); *Sociology* (Home University Library) (1935); *Life and Work of L. T. Hobhouse* (with J. A. Hobson) (1931); *The Material Culture and Social*

HUMAN AFFAIRS

Institutions of the Simpler Peoples (with J. E. Wheeler and L. T. Hobhouse) (1915).

DR. HAVELOCK ELLIS

"... undoubtedly the most civilized Englishman living to-day" (H. L. Mencken).

Born in Surrey and spent most of his childhood on the sea. He was first a teacher in Australia, and then returned to England to become a physician. Since then he has devoted himself entirely to scientific and literary pursuits which have secured him permanent fame. He has spread enlightenment in that sphere of life where it was most needed, liberating his contemporaries from the constrained prurience of a bygone age. He stands with Freud among the conspicuous figures of our time. Few others have done so much for the mental health of their fellow men.

His scientific contributions are contained mostly in *Studies in the Psychology of Sex* and *Man and Woman*. The rest of his works are too well known to need listing here.

PROFESSOR B. MALINOWSKI, M.A., D.Sc.

It would be difficult to think of a more authoritative name in the field of anthropological science than that of Dr. Malinowski. The latter was first trained in the Exact Sciences and Mathematics at the Polish University of Cracow, where he received his doctorate with the highest honours. He then worked for a time in the laboratories of Physical Chemistry and Experimental Psychology at the University of Leipzig. From Psychology he turned to Anthropology, studying in London with Professors Westermarck and Seligman, and received, *in absentia*, the Doctor of Science degree in 1916. From 1914 to 1920 he conducted research into the culture of the natives of Nailu and the Trobriand Islands. He has lectured at the University of London (School of Economics), 1912-13, and

APPENDIX

since 1922, being appointed to the chair of Anthropology in 1927.

Professor Malinowski is the founder of the "functional" school of Anthropology. He approaches to the problems of culture by making it clear that no fact of human civilization stands alone. Every aspect of culture, he holds, has meaning and reality only in the manner in which it functions in the totality of the civilization of which it is a part. Thus he has shown how a myth is significant because of the rôle it plays in giving a people the charter of belief, ritual, and ethics. Even such a prosaic aspect of civilization as food-gathering or agriculture must be studied in terms of its ceremonial and social as well as of its biological significance.

Professor Malinowski's writings are well known, and his books—*The Family among the Australian Aborigines*; *Argonauts of the Western Pacific*; *Crime and Custom*; *Sex and Repression*; *The Sexual Life of Savages of N.W. Melanesia*; *The Foundations of Faith and Morals*; *Coral Gardens and their Magic*—are but the more widely read in a substantial list of scholarly publications in *Nature*, *Journal of Royal Anthropological Institution*, *Economica*, etc. etc. Dr. Malinowski is associate editor of *Human Biology*, Foreign Member of the Royal Academy of Holland, and an Hon. Dr. of Sciences of Harvard University.

EMANUEL MILLER, M.A., M.R.C.S., D.P.M., late Capt. R.A.M.C.

Studied first at Cambridge, whence he proceeded to medical work. He is now considered a leading psychopathologist and clinician and devotes most of his leisure (if any) to research. He is Hon. Psychiatrist to West End Hospital for Nervous Diseases; Hon. Director of Child Guidance Unit; Physician to Institute of Medical Psychology; Member of Child Guidance Council; and holds various other posts.

HUMAN AFFAIRS

Dr. Miller has been lecturer to Medical post-graduates at Cambridge and still gives University Extension lectures in London. He is a Fellow of the Royal Society of Medicine, of the Société de Morphologie, and late chairman Medical Section, British Psychological Society. His publications include, besides numerous papers in scientific journals, *Types of Body and Mind*; *Modern Psychotherapy*; *Insomnia and Disorders of Sleep*. To be published shortly are *The Problems of the Growing Child* (editor); *The Generations: a Study of Parents and Children*. Dr. Miller creates spare moments in which to paint, model, and walk. He is married and has two young children.

PROFESSOR K. MANNHEIM, DR. PHIL.

Professor Mannheim was born in Budapest. He studied at the Universities of Budapest, Berlin, Paris, Freiburg/Br., and Heidelberg. At the latter university he lectured from 1926 till 1930, when he was appointed to the chair of Sociology in the University of Frankfurt-on-Maine. Since 1933 he has been on the staff of the London School of Economics (University of London).

Professor Mannheim's studies commenced with History, Literature, and Philosophy. During the post-war period he gradually realized that a satisfactory explanation of changes in human culture could only be obtained through an exhaustive study of society. For this study of society he took as his guide the sociologist Max Weber. To supplement his studies he applied himself to Economics, Social History, Psychology, and the methods of sociological field-work.

Professor Mannheim believes that the prevention of a general breakdown in our society depends largely upon, besides the necessary changes in social organization, the improvement of the Social Sciences which, besides the old Humanities, will gradually become for us the "New Humanities".

APPENDIX

Professor Mannheim's stay in this country has brought home to him at once the urgent need and the great difficulty of translating one culture in terms of another. The best elements in English and German culture, he holds, need to be synthesized. Neither the purely factual approach of the former nor the purely theoretic approach of the latter is in the long run fruitful; the requirement is an integration of both. Above all have we in this country to realize, before it is too late, the growing potency of mass and general social influences. The individualistic world in which, owing to the relative security of recent centuries, English people still live is altogether challenged, for society has undergone profound changes. A sense of the ubiquitous socializing process must be rapidly acquired.

Besides many brilliant contributions to sociology in German, Professor Mannheim has written in English: *Rational and Irrational Elements in Contemporary Society* (Hobhouse Memorial Lecture, 1934); *The Crisis of Culture in the Era of Mass Democracies and Autarchies* (*Sociological Review*, 1934); *German Sociology* (1918-33) (*Politica*, 1934); *The Place of Sociology* (in *First Conference on the Social Sciences; their Relations in Theory and Teaching*), "The Sociology of Human Valuations" in *Further Papers on the Social Sciences* (ed. J. E. Dugdale, London, 1937) (London, 1936); *Ideology and Utopia* (Internat. Lib. of Psychol., Phil., and Scientific Meth., London, 1937). In preparation are: *Human Nature and Society in an Age of Reconstruction*; *The Sociological Approach to the Study of History*.

THE EARL OF LISTOWEL, PH.D. LONDON

He is author of two works on philosophical subjects, *The Values of Life* and *A Critical History of Modern Aesthetics*. He studied for some time in Paris at the Sorbonne. Later, he was attached to Toynbee Hall for two years, where he acquired an interest in social problems together with first-hand knowledge. In recent times he

has had to give up most of his academic research owing to the extensivity of his political work, though he still reads papers to the Aristotelian Society and to other learned bodies. In the House of Lords he holds the position of Junior Whip to the Opposition. He takes an active part in municipal government and represents the East Lewisham constituency on the London County Council.

WILLIAM McDougall, F.R.S.

The doyen of psychologists in the English-speaking world. For the last fifty years McDougall has been writing, in incomparably vigorous and forceful style, on most aspects of psychology and mental philosophy. Widespread interest in psychology is due more to him than to anyone else. Above all, the finished architecture of his hormic system has formed the foundation of mental science for innumerable students. His pioneer work on Social Psychology cut a path through a veritable jungle of chaotic notions. As a critic he is known for his devastating analysis of Behaviourism and mechanistic science in general.

McDougall has taught at Oxford, London, Harvard, and Duke. Of late years, besides continuing his experimental work, he has turned his attention to the relations of the sciences and to general problems of society, and here, as elsewhere, he has made valuable original contributions. All who know him personally are impressed more than anything else by his dominating personality and by the keen penetration of his intellect.

Chief works : *Introduction to Social Psychology* ; *An Outline of Psychology* ; *Outline of Abnormal Psychology* ; *Modern Materialism and Emergent Evolution* ; *The Group Mind* ; and many others.

INDEX

- Accident proneness, 88
- Agricultural Marketing Act, 1931, 67
- America, compared with Russia, 289
- American democracy, 287
- American Federal Reserve System, 64
- Anarchism, 20
- Anthropology : as a science, 208 ff.
- Cultural, method of, 200
- new data of, 179
- A priori* and sociology, 171
- Aristotle, 143
- Australoid, race, 91
- Autonomic nervous system, 127
- Bacon, Francis, 74
- Basque race, 99
- Benedict, Dr. Ruth, *Patterns of Culture*, 206, 223
- Bergson, Prof. H., (note) 325
- Biology, in education, 153
- Bismarck, 170
- Blood-groups, 93
- Board of Education, 156
- Boas, Prof. Franz, 206, 223
- Bottomley, Horatio, 270
- Bread, democratization of, 51 ff.
- Brend, Dr., *Sacrifice to Attis*, 192
- British Journal of Educational Psychology*, 149
- Calories, 24
- Cancer, 137
- Carlyle, 311
- Cattell, R. B., *Is National Intelligence Declining ?* 344
- Cause and Effect in Society, 281
- Chagga tribes, contrasted with the Masai, 216, 217 ff.
- Character, education of, 157
- Chesterton, G. K., 156
- Child Guidance Clinics, 158
- Christianity, 169
- Civics, 153
- Civilization, 145
 - constants in, 201
- Colbert (Louis XIV), 62
- Collectivism, 299
- Communism : and Individualism in Primitive Society, 234-5
- and Slavery, 250
- Community Cultures, 299
- Control of raw materials, 64
- Cook, Caldwell, *Play Way*, 158
- "Cost" of Capital and Labour, 59
- Couvade, 202
- Crime, scientific treatment of, 175
- Criminality, incidence of, 30
- Culture : areas, 179
 - Science and Intuition in the study of, 210
- Curative and Preventive Medicine, 133
- Curriculum, educational, 153
- Curry, W. B., 247
- Dalton Plan, 158
- Delinquency and social milieu, 272
- Descartes and Plato, (note) 322

HUMAN AFFAIRS

- Dewey, John, 150
 Dialectical Materialism, 303
 Dictatorships, modern, 205
 Diet, national comparisons of, 47
 Diffusionist theories of culture, 250
 Dunlap, Prof. Knight, 192
- Economic basis of politics, 311
 Economics, compared with languages, 153
 Education : in Russia, 289
 in Sex, 195
 Educational Ideals, 144
 Ellis, Havelock, 157
Encyclopædia Britannica, 145
 English Tradition in education, 143
 Environmental influences on Culture, 219 ff.
 Epidemics : typhoid, cholera, 26
 cholera, typhoid, smallpox, 134
 Eskimos, diet of, 46
 Eugenic endowment, 121
 Eupathoscope, 80
 European History and Economic problems, 56
 Examination system, 114
 Extravert and Intravert, 102
- Fascist achievement, 315
 Fisher, H. A. L., 178
 Fitness, 136
 Flemings and Walloons, 100
 Freedom, verbal, 185
 Free Trade and Protection, 314
 French Revolution, 42
 Freud : and Education, 159, 255
 Lectures on Psycho-analysis, 193
 view of magic, 239
 Froebel, 143
- Genetics, 128
 Genetic changes and Social changes, 171
- Genetic and environmental factors in sociology, 178
 Glover, Dr. E., 301
 Gourmont, Remy de, 186
 Graebner, 224
 Graham Wallas, quoted, 154
 Group Mentality, 177
- Hamilton, Dr. G. V., 189
 on Mother and Sex, 197-8
 Hamley, Prof., *Yearbook of Education*, 149
 Hartog, Sir Philip, *An Examination of Examinations*, 155
 Hawley Smoot Tariff, 65
 Health knowledge in schools, 132
 Heath, Prof., 145
 Hegel, 303
 Hegel's Historical Idealism, 205
 Henry VIII, 62
 Hereditary factors discussed, 176
 Herodotus, as anthropologist, 237
 Hindus, diet of, 46
 Historical Development, scientific view of, 178
 Hobhouse, Prof. L. T., 254
 Hogben, Prof. L., 301
 Huxley, Aldous, 151, 185
 Huxley, Prof. Julian, 142
 Huxley, Thomas, on education of character, 158, (note) 145
- Indeterminacy, 169
 Industrial Revolution, 57, 62
 Intelligence : decline of, 32
 and temperament tests, 155
- Japan, industrial competition, 45
 Jesus, 305
 Jewish race, history of, 98 ff.
 Jones, Dr. Wynn, 148
- Katathermometer, 80
 Keyserling, 193
 Kinship, theory of, 228 ff.
 Kruger, Ivor, 270

INDEX

- Lane, Homer, 157
 Legal Justice, 317
 Legal Knowledge for politicians, 316
 Locke, 143
 London School of Economics, 312
 Machines, influence in Society, 21
 Magic, function of, 240
 Malinowsky, Prof., 193
 Marx, as a gospel, 251
 Masai tribe, 217 ff.
 Maternity Mortality, 138
 McDougall, Prof. W., 255
 Frontiers of Psychology, (note) 326
 Mead, Dr. Margaret, *Sex and Temperament*, 209
 Mechanics' Institutes, 143
 Melanesia, 91
 Mental hygiene, 154
 Metaphysics, discussed, 321
 Methodology of Social Sciences, 331
 Mill, John Stuart, 158
 quoted, 319
 Mind, scientific observation of, 324
 Mongolian race, 91
 Monogamy, development of, 229
 Montessori, Dr., 142, 158
 Morphine, 39
 Mother, as sex guide, 194
 Motion Study, 78

 Negroid race, 91
 Neill, A. S., 157
 Neuro-endocrine system, 127
 New Education Fellowship, 158
 New Fabian Research Bureau, 312
 Nilotes and Pygmies, 91
 N.R.A. Scheme in America, 66
 Nunn, Sir Percy, 146
 Nutrition, problem of, 44

 Objectivity, absolute and relative, 22

 Oedipus situation, 267
 Oedipus and Electra, Adler on, 197
 Opinions and beliefs, patterns of, 178
 Osborne, Dorothy, 194
 Output curves (psychology), 82

 Pandemic of influenza, 135
 Paul, St., 305
Planwirtschaft, 64
 Plato, 305
 on philosophers as rulers, 342
 Political Machine, 8, 307
 Political Science, 311
 Population : changes in, 282
 decline, 136
 degeneration, 137
 problems, 174
 Price regulations, 12
 Prisons, purpose of, 317
 Private property and freedom of contract, 56
 Progress of science, 281
 Project Method, 158
 Propaganda : in education, 145
 as political machine, 290
 Psychology : in education, 154
 experimental, 150
 mass, 295
 and probability, 324
 scope of, as dynamic, 36, 38
 Psychoneurotic conditions, 125
 Public Schools, 153

 Race, origin of, 94
 Religion, history of, 169
 Rhythmic and automatic movement, 81
 Roheim, 223
 Rousseau, 256, 158
 Russell, Bertrand, 146, 159
 Russia, propaganda, 288

 Sakai, 91
 School Medical Services, 129

HUMAN AFFAIRS

- Scientific Method, Graham Wallas on, 154
 Scientific observation of economic problems, 71
 Semang, of Malaya, 91
 Sensori-motor tests, 88
 Sex education, 154
 Sex knowledge and the young, 181 ff.
 Shakespeare, 148
 Shaman of the Eskimos, 220
 Shaw, Bernard, 143
 Sickness benefit, 124
 Social Biology, 171
 Social Causation, and mental factors, 178
 classification by sociology, 176
 environment and sex, 197-8
Social Hygiene, Journal of, 196
Social Science Journal, 341
 Society: causal factors in, 176-7
 Society, defined, 19 ff.
 Sociology, as a science, 168
 Socrates, 320
 Soviet Union, and science, 303
 Spencer, Herbert, 158, 324
 Spengler, Oswald, on culture, 199, 204
 State, absolute, 286
 Statistics, and sociology, 169
 Subsidies, 66
 Swiss, French, and German, 100
 Syphilis, 184-5
 Taboos, sexual, 183-4
 Tarde, le Bon, as social psychologists, 273
 Technocracy, (note) 343
 Tennessee Valley Authority, 70-1
 Time Study, 78
 Toynbee, Prof., quoted, 172
 Trade cycle, 64-5, 313
 Tradition, changes in, 21
 Unemployed, 282
 Unemployment in Fascist countries, 291
 University Extension Lectures, 152
 Unnecessary movements, 78
 Unwin, Dr. J. D., *Sex and Culture*, 192
 Utilitarian versus picturesque society, 276
 Value, problems of, 334
Variatio delectat, 44
 War: causes of, discussed, 173
 economies, 282
 in primitive society, 221
 Wells, H. G., *Experiment in Autobiography*, 192
 Westermarck, Dr., *The Future of Marriage*, 190, 255
 Wheat Quota Act, 62
 Whitehead, Prof. A.N., *Adventure of Ideas*, 325
 Wile, Dr. Ira, *Journal of Social Hygiene*, 187
 Will, Freedom of, and sociology, 168
 Women, sexual status of, 186
 Woolf, Leonard, quoted, 301
 Wordsworth, quoted, 152
 Workers' Education Association, 152
 Working Conditions, 80

